

A way to get VVealth,

BY

Approued Rules of Practice in good Husban-
dry and Huswiferie.

CONTAINING

The foure principall Offices which support
and maintaine a Familie.

AS

- I. The husbanding and *inriching* of all *sorts* of grounds, making the *barren* equall with the *most* fruitfull: with the reducing to their first perfection all grounds whether arable or pasture, spoyled by the overflowing of Salt-water, or sea-breaches, and the *inriching* of the Hop-garden, & other knowledges not published before: Also the *preservation* of Graine; and a computation of *Men & Cattel* labors.
- II. The ordering and *curing*, with the *natures*, *breeding*, *use*, & *feeding* of all *sorts* of *Cattell* and *Fowle*, fit for the vse of *man*: As also the *riding* and *dieting* of *Horses*, either for *Warre* or *Pleasure*.
- III. The office of the *English Housewife* in *Physicke*, *Surgerie*, *Extraction* of *Oyles*, *Banquetting* *stuffe*, *Ordering* of *Feasts*, *Preseruing* of *Wines*, *Conceited secrets*, *Distillations*, *Perfumes*, *ordering* of *Wool*, *Hempe*, *Flax*, *Dying*, vse of *Dayries*, *Malting*, *Brewing*, *Baking*, and the profit of *Oates*.
- IIII. The office of *Planting* and *Grafting*, and the *inriching* of grounds for that purpose: the office of *Gardening* and the ornaments thereto: with the husbanding of *Bees*, & other things of that nature.

The first three Bookes gathered by G. M. The last by M^r. William Lawson,
for the benefit of the Empire of Great Brittain.

And all these newly corrected and augmented by the Authors.

Printed at London for Roger Jackson, and are to bee sold at his shop neere
Fleetstreet Conduitt. 1625.

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Markbams farwell to
HVSBANDRY

or,
The inriching of all sorts of Barren and
Sterile grounds in our Kingdome, to be as fruit-
full in all manner of Graine, Pulse, and Grasse, as
the best grounds whatsoeuer :

Together with the annoyances, and preser-
uation of all Graine and Seede, from one yeare
to many yeares.

As also a husbandly computation of mens and cattels
dayly labours, their expences, charges, and
vttermost profits.

Newly reuiewed, corrected, and amended: toge-
ther with many new Additions, and
cheape Experiments:

*For the bettering of arable, pasture, and wooddy grounds: Of
making good all grounds againe, spoiled with overflowing of
salt water by sea-breaches, as also the inriching of the hop gar-
den, and many other things neuer published before.*

LONDON,

Printed by M. F. for Roger Jackson, and are to be sold at his Shop
neere Fleet-streets Conduit.

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These Effects are Common

• 2501



TO THE RIGHT VVORSHIPFULL

and his most worthy friend

M^r Bonham Norton Esquire.

Worthy Sir :



Knowledge which is the diuine mother of certaine Goodnesse, neuer came vnwelcome to a knowing Iudgement; no more I hope shall this my labour to your worthy Selfe, since doubtlesse you shall finde in it many things New, some things necessary, and nothing which hath not in it some particular touch of profit: It is a worke your former encouragements to my other labours did create in me; and the wants you worthily found, I hope shall bring you supplies both wholesome and becomming. The experience I assure your Goodnesse, was the expence of a bitter and tedious Winter; but the contentment (in gaining my wish) made it more pleasant then all the three other Seasons. What euer it be, it comes to you full of loue, full of service: And since I know Vertue measureth all things by its owne goodnesse; it is enough to me, that I know you are that Vertue. In you is power to iudge; in you is Authoritie to exercise Mercy, let them both flye from your Goodnesse, with that mildnesse, that in them my hopes may be crowned, and my Selfe rest euer at your service,

GERVASE MARKHAM.

The Preface to the READER,

Shewing the use, profit, and truth of the Worke.

Additions
this whole
Preface.

THe use and application of this Worke (gentle Reader) is to reduce the hard, Barren and Sterile grounds, such as were neuer fruitfull, or such as haue been fruitfull and are made barren by ill husbandry, to bee generally as fruitfull as any ground whatsoever; from whence shall ensue these generall profits.

First, plenty of Corne and Pulse, because all grounds being made able and apt for tillage, the Kingdome may afford to sowe for one bushell that is now; hereafter fins hundred, so mighty great are the vnfruitfull waists of Heather, Downe, Mores, and such like, which at this day lie unprofitably, and to this abundance of Corne will arise an equall abundance of Grasse and Pasture, for as the best ground of the worst, is to bee conuerted to Pasture, and the worst to Tillage, so that worst being tilled and drest, when it hath done bearing of Corne, (which will be in fixe or seuen yeares) shall for as many yeares more beare as good pasture either for breeding or feeding as can be required, and then being newly drest againe, shall newly flourish in its first profit.

Secondly, whereas in fruitfull places the third or fourth part of all arable ground is lost in the fallow or tilth ground, now in these barren grounds you shall keepe no fallow field at all, but all shall beare either Corne or Grasse, that fallow part seruing to pay for the charge bestowed on it and the rest.

Lastly, wheras in fertile grounds you cannot haue either Wheat, Barley, or Rye, under two, three, foure, fve, and sometimes fixe seuerall plowings, as fallowing in Ianuary and February, Stirring in Aprill and May, Foiling in Iuly and August, Winter-ridging in October and November, and Sowing with other Ardors; now in these hard grounds restored you shall not plow aboue twice at the most, to the saving of the Husband-mans paines, his Cattell trauell, and a larger limitation of time for other necessary businesses.

For the truth of the Worke he that will ride into the barren parts of Deuon-shire or Cornwall, into the mountainous parts of Wales, into the hard parts of Middlesex^e or Darby-shire, or into the cold parts of Northumberland, Cumberland, Westmoreland, Lancashire, or Cheshire, shall find where industrie is used, a full satisfaction for all that is here writtten.

Farewell.

Thine, G. M.



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ADDITION.

*An excellent way to take Moles, and to
preserue Grounds from such
annoyance.*

PVt Garlike, Onions, or Leekes, into
the mouthes of the holes, and they
will come out quickly as amazed.



MARK HAMS

Farewell to Husbandry.

CHAP. I.

The nature of Grounds in generall : But particularly of the barren and sterile earth.



O come to the full effect of my purpose without any preambulation, or satisfaction to the curious, for to the honestly vertuous are all mine endeavours directed : you shall vnderstand that it is meet that every Husbandman be skilfull in the true knowledge of the natures of Grounds ; as which is fruitfull, which not : of which, in my first Bookes I haue written sufficiently ; nor doe I in this Booke intend to write any tittle that is in them contained ; for as I loue not Tautalogie, so I deadly hate to wrong my friend. Grounds then, as I haue formerly written in my first Books, being simple or compounded ; as simple Clayes, or simple Sands ; or compounded of Clayes, Sands, or Grauels together ; may bee all good, and all fit to bring forth increase, or all euill and barren, and vnfit for profit: for every Earth, whether it be

B

simple

simple or compounded, whether of it selfe or of double mixture, doth participate wholly with the Clyme wherein it lyeth; and as that is more hot, or more cold, more moist, or more dry, so is the Earth euer more or lesse fruitfull: yet for the better vnderstanding of the plaine countryman, you shall know that both the fruitfull and vnfruitfull Ground haue their seuerall faces and characters whereby they bee as well knowne as by the Clyme or situation of the Continent; for that ground which though it beare not any extraordinary abundance of grasse, yet will load it selfe with strong and lusty weeds, as Hemblocks, Docks, Mallowes, Nettles, Ketlockes, and such like, is vndoubtedly a most rich and fruitfull ground for any graine whatsoever. Also, that ground which beareth Reede, Rushes, Clover, Daisie, and such like, is euer fruitfull in Grasse and Herbage; so that small cost and lesse labour in such Grounds, will euer make good the profit of the Husbandman: But with these rich Grounds at this time I haue nothing to doe.

**Knowledge
of barren
Grounds.**

To come downe then to the barren and vnwholesome Grounds, you shall vnderstand that they are to be knowne three seuerall wayes; first, by the Clyme and Continent wherein they lye; next, by their constitution and condition; and lastly, by outward faces and characters. By the Clyme and Continent, as when the ground lies farre remote from the Sunne, or when it lyes mountainous and high, stony and rockie; or so neere vnto the skirts and borders of the Sea, that the continuall Fogges, Stormes, Mysts, and ill Vapours arising from thence, doe poyson and starue the Earth: all which are most apparent signes of barrenesse. By the Constitution and Condition, as when the ground is either too extreemly cold and moist, or else too violently hot and dry; either of which produ-
ceth

ceth much hardnesse to bring forth, and sheweth the earth so lying, to bee good for little or no profit. By the outward Faces and Characters, as when you see (in stead of Grasse, which should be Greene, flowry, and thicke growing) a pale thin mossie substance couer the earth, as most commonly is vpon all high Planes, Heathes, Downes, and such like : or when you see the ground couered with Heath, Lyng, Broome, Braken, Gorse, or such like, they be most apparent signes of infinite great barrennesse, as may be seene in many Mores, Forests, and other wyld and wooddy places. And of these vnfertill places, you shall vnderstand that it is the Clay ground, which for the most part brings forth the Mosse, the Broome, the Gorse, and such like : the Sand, which bringeth forth Brakes, Lyng, Heath, and the mixt earth, which vtters Whinns, Briars, and a world of such like vnnaturall and bastardy Issues.

Thus hauing a true knowledge of the Nature and Condition of your ground, you shall then proceede to the ordering, earcing, and dressing of the same, whereby it may not onely be purged and clenfed from those faults which hindred the increase thereof, but also so much bettered and refined, that the best ground may not boast of more ample increase, nor your more fruitful placed neighbours exceede you in any thing, more then in a little ease.

CHAP. II.

Of the Ordering, Tilling, and Dressing of all sorts of plaine barren Clayes, whether they be simple or compounded.

THou whom it hath pleased God to place vpon a barren and hard soile, whose bread must euermore be grounded

grounded with sweat and labour, that maieft nobly and victoriously boast the conquest of the Earth, hauing conquered Nature by altering Nature, and yet made Nature better then she was before : thou I say that takest this honest delight in goodnesse, hearken vnto these following Precepts.

The first
enriching
of barren
Grounds.

As soone as thou hast well pondered and considered the nature of thy ground, and dost finde that it is altogether barren and vnfruitfull, the Clyme and condicion not suffering it to bring forth any thing of worth or profit, and that thou hast well weighed what manner of Earth it is, as that namely it is either a simple Clay, or a Clay so mixt with other earths, that yet notwithstanding the Clay is still most predominant, thou shalt then select or chuse out of this earth so much as to thy selfe shall seeme conuenient, it being answerable to the strength of thy Teame, and the abilitie of thy purse and labour to compasse ; and this Earth so chosen out, thou shalt about the beginning of May, in a faire season, breake vp with a strong Plough, such as is generally vsed in all strong Clay grounds, the Share being rather long then broad, and the Colture rather somewhat bending then straight and euen, according as the nature of the ground shall require, which euery simple plowman will soone finde out in turning vp two or three furrowes; for according to the cutting of the earth so must the Husbandman fashion the temper of his plough.

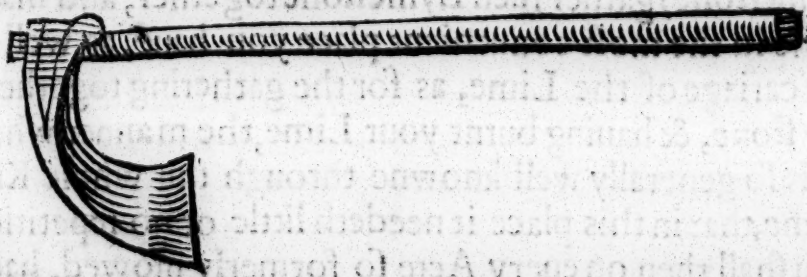
The manner
of plowing.

Now for the manner of plowing this bad and barren earth, if the ground lye free from water (which commonly all euill barren earths doe) you shall then throw downe your furrowes flat, and betwixt euery furrow you shall leaue a balke of earth halfe as broad as the furrow, and so goe ouer, and plow your whole earth vp, without making any difference or distinction of lands: but if you feare any
annoyance

annoyance of water, then you shall lay your furrowes more high, neere, and close together, diuiding the ground into seuerall lands, and proportioning euery land to lye the highest in the midst, so that the water may haue a descent or passage on either side.

Now so soone as you haue thus plowed vp your land, and turned all the swarth inward vnto the earth, you shall then take Hacks of yron, well steeled and reasonable sharp, such a competent number, as or your purse or power can compasse, or the greatnesse of your ground requireth, for you shall vnderstand that one good hacker, being a lusty labourer, will at good ease hacke or cut more then halfe an Acre of ground in a day; and with these hacks you shall hew and cut to peeces, all the earth formerly plowed vp, furrow by furrow, and not the furrowes onely, but also each seuerall balke that was left betweene, & any other greene swarth whatsoeuer the plough had escaped, and it shall bee cut into as small pieces as conueniently you can; for thereby is your mould made much more mellow and plentifull, and your seed at such time as it is to be cast into the earth, a great deale the better and safer couered, and much more sooner made to sprout and bring forth increase. Now for the shape and fashion of these Hacks, you shall behold it in this Figure.

Hacking of
Ground.



When you haue thus hackt all your ground, and broke in peeces all hard crusts and toughnesse of the swarth, you shall

Sanding of
Ground.

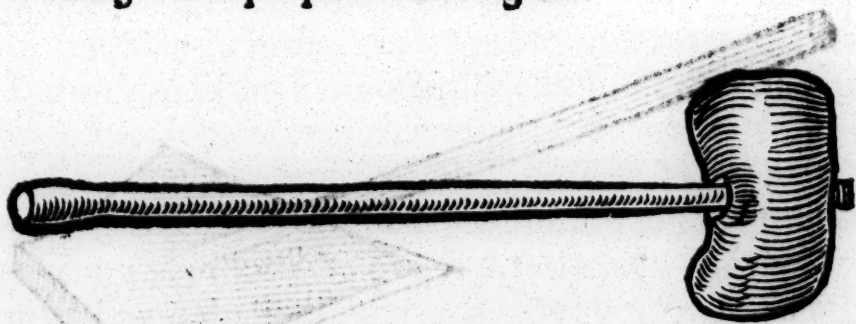
shall then immediately, with all the conuenient speed you can, (because time is very precious in these labours) if you be neere vnto any part of the Sea-coast, or to any other Creeke or Riuer, where the salt water hath a continuall recourse, thence fetch (eyther on horse-backe, or in Cart, or other Tumbrell, such as the nature of the Country, or your owne ease can afford) great store of the salt Sand, and with it couer your ground which hath beene formerly plowed and hackt, allowing vnto euery Acre of ground, threescore or fourescore full bushell, of Sand, which is a very good and competent proportion; and this Sand thus laid, shall be very well spread and mixed among the other hackt and broken earth. And herein it is to be noted, that not any other sand but the salt is good or auailable for this purpose, because it is the brine and saltnesse of the same which breedeth this fertility and fruitfulness in the earth, choaking the growth of all weedes and bad things, which would sprout from the earth, and giuing strength, vigour, and comfort to all kinde of Graine or Pulse, or any fruit of better nature.

Lyming of
Ground.

When you haue thus sanded your earth, you shall then if you haue any Lymestone about your Grounds (as barren earth: are seldome without) or if you haue any quarries of stone (which are seldome vnaccompanied with Lymestone) gather such Lymestone together, and make a Kilne in the most conuenient place you haue, as well for the cariage of the Lime, as for the gathering together of the stone, & hauing burnt your Lime, the manner whereof is so generally well knowne through the whole Kingdome, that in this place it needeth little or no repetition; you shall then on euery Acre so formerly plowed, hackt, and sanded, bestow at least forty, or else fifty bushels of Lym, spreading and mixing it exceedingly well with the other

shall then see if there remaine any clots or hard lumps of earth vnbroken, which the teeth of the Harrowes are not able to teare in pieces (as it is very likely you shall perceiue many) for these hard barren earthes which are plowed vp in their greene swarthes, are nothing neere so easily broken and brought to mould, as are the mellow soft earths which haue been formerly plowed many times before, because the hard and intricate roots of the Grasse, Mosse, and other quick substances growing vpon the same doth binde and hold the mold so close and fast together, besides the naturall strength and hardnesse of the earth, that without much industrious and painefull labour, it is impossible to bring it to that finenesse of mould which Art and good Husbandry requireth; therefore, as soone as you behold those clots and lumps to lye vndisseuered and vnbroken, you shall forthwith take good strong clotting beetles, or maules made of hard and very sound wood according to this proportion of figure.

Of clotting
Ground.

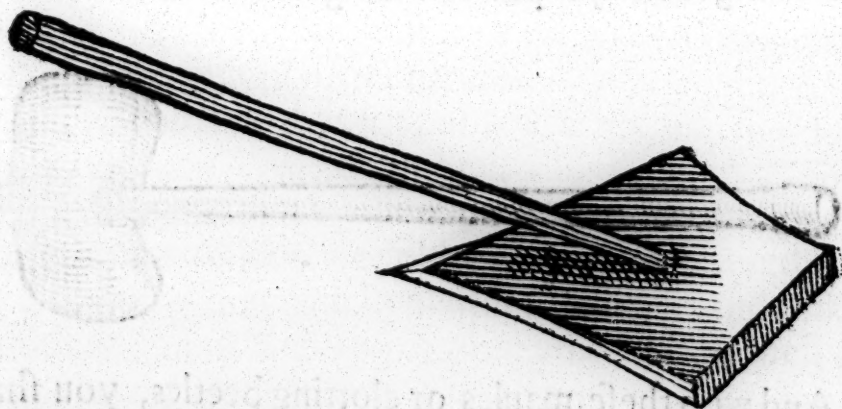


And with these maules or clotting beetles, you shall breake all the hard clots and lumps of earth in pieces, euen to so small dust, as possibly you can; because you are to presuppose, that these clots thus hard, tough, & vnwilling to be with any meanes digested into mould, are either not at all, or else very insufficietly mixed with the Sand, Lyme and other meanures; and therefore you must the rather breake

break them, that thereby they may mixe, and giue easie passage to the graine, and not like heauy poysses and dead lumps lye and presse downe the Seede so that it cannot sprout.

An other
manner of
clotting.

But if it so fall out that partly by the hardnesse of the ill earth, partly through the season and drynesse of the yeare, that these clots and lumps of earth will either not be broken at al, or at least so insufficiently that the mould wil not be any thing neere so fine as you would haue it; you shall then hauing done your best indeuour, let your ground rest till there haue falne a good ground shower or two of rain, which may wet the clots through and through; and then the next faire blast, you shall take your clotting beetles, but not those which you tooke before in the dry season, but some much lighter, broader and flatter, beeing made of thicke Ash-boards more then a foot square, and aboue two inches in thicknesse, according to this figure.



And with these flat maules and beetles, you shall breake all the vnbroken clots and lumps of earth which shal trouble or annoy your ground, making your Lands as plaine and smooth as is possible, so that the graine may haue easie passage forth; which labour as soone as you haue finished, you shall then referre the increase and prosperi-
tie

tie thereof vnto the mercies of God, who no doubt will giue his blessings according to thy labour and thankfulness.

As touching the trimming and weeding of this Corne, Of weeding after it is sprung a foot aboue the earth, or thereabouts, you shall vnderstand, that these hard barren grounds are very seldome troubled with weeds; for weeds, especially great, strong, and offensive weeds are the issues of rich and fertile soyles; yet, if through the trimming and making of this earth (which is not commonly scene) you doe perceiue any store of thistles, or other groffer weeds to spring vp, you shall then in the Month of May, with hookes, nippers, and such like tooles, cut them away or pull them vp by the rootes, which indeed is the better manner of weeding.

Now here is to be vnderstood, that your ground being thus dressed and trimmed as is before shewed, you may very well for the first two yeares sow Wheat or Rye vpon it; but Wheat is the greater profit and more certaine feed, the third yeare bestowing but your fold of Sheepe vpon it, that is meaning it with your sheepe, (for it is to be intended, that in these barren earths sheepe are the greatest stocke of which the Husbandman can boast) you may very well sowe it with barley, and haue a fruitfull and plentifull crop thereon: the next three yeares, you may sowe it with Oates; and the seventh yeare you may sowe it with small white Garden Pease or Beanes, according as you shall finde the strength and goodnesse of the ground, (for Beanes desire somewhat a richer soile then the Pease) then for three or foure yeares following the seuen, you may let it lye at rest for grasse, and doubtlesse it will yeeld you either as good pasture, or as good Medow as you can reasonably require. And then after the expence of this

Seuerall feedes seuerall yeares.

noisur O

now in Ay

time, it shall bee good that you dresse and order your ground againe in such sort as was formerly declared; and thus you may euery yeare dresse one or other peice of ground, till you haue gone ouer all your ground, or at least as much as you shall thinke expedient; and without faile, hee that is Master of the most fruitfullest and richest soyle, shall not boast of any greater increase then you shal, only your charge may be a little more, and so shall be also your commoditie, which shall make an amends for your charge; as for your toyles, yours shall be much the lesse, by a iust computation; for though you haue many labours, yet they are but Sommer labours, and neither hurt your owne body, nor your Cattell: whereas the Master of the rich soile is in continuall work both Winter and Sommer, boursing twice so much to confound the superfluous growth of weedes as you doe to beget the increase of Corne; and whereas he must euer keepe a third or fourth part of his Corn-ground without fruit, you shall not keepe any which shall not yeeld you a sufficient commoditie.

Obiection.

Now me thinks I heare in this place, to bee objected vnto me, that whereas I do prescribe the sanding of these barren Earths with the salt Sea-sand, and no other (as it is true, for all other fresh sand is vnaileable) what if the ground doe lye so farre within the Land, that there is no salt sand within many score of miles of it, how then shall I make good my barren earth; sure to fetch sand so farre, will neuer equall the cost, or it may bee this experience hath no further limits then to such hard and barren earths as lye alongst the Sea-coast onely.

Answer.

To this I answer, that all be this salt Sea-sand bee of infinite good and necessary vse, enriching grounds wonderfully much, yet is not this experience of bettering of barren soiles, so strictly bound therunto, but that without

any

any vse of the same, you may make your earth as fruitfull in Corne or Grasse, as hath beene already formerly declared.

Therefore if your ground lye much within the Land, and farre from the Sea, so that this commodity of sand is not by any possible meanes to bee gotten, then you shall (hauing first lookt into the nature of your ground, and finding it to be by all charracters and faces a cold, barren, stiffe, dry Clay, yeelding nothing but a short mossie grasse, without any other burthen at all as is seene vpon most Plaines, and Downes of this Kingdome) first plow it and hack it as was before shewed in the former part of this Chapter, then instead of sanding it, you shall lime it as before said, or rather a little more plentifully, then you shall manure it, after (a seede time) you shall plow it and hack it againe, then harrow it as before said; then to euery aker of ground, you shall take two bushels of very dry bay salt and in such manner as you sowe your Wheate, you shall sowe this salt vpon the ground, then immediatly after the sowing of the salt, you shall sowe your Wheat, which Wheat would bee thus prepared before you sowe it; the day before you are to sowe your graine, you shall take Bay salt and water, and mixing them together make a brine so strong that it will beare an egge, then put the Wheat you are to sowe into that brine, and let it steepe therein till the next day, then draine it as clean as may be from the brine, and so sowe it, harrow it, clot it, and weede it, as was before declared, and no doubt but you shall finde a maruailous great increase thereby: for this I can assure you, both from a most certaine knowledge, and a most worthy relation, that a Gentleman buying some store of seed Wheat, and inforst to bring it home by Sea, by some casuall meanes some of the sacks at the vnlading, fell into the Sea,

and

Ordering
Earth where
sands want
tech.

Sowing of
Salt.

The excel-
lency of salt.

and were much drencht in the salt water, wherat the Gentleman being griued (as doubting some hurt to come to the seed) yet inforst of necessity to make vse thereof, caused all the wheat which was so wet to be sown by it selfe in a particular place, and vpon the worst ground which he had, (as much dispairing in the increase thereof) and it is most infallibly true, that of that wet Seed, hee receiued at least fiue-fold more profit then of any other, and from thence it came, that this experiment of Brine & the sowing of salt hath taken place; from which the painfull husbandman hath found such infinite increase to arise, that the vse thereof will neuer bee layed downe in this Kingdome, neither is the thing in it selfe, without good and strong probability of much increase and strength for the bettering of all manner of earable grounds; for there is nothing which killeth weedes, quickes, and other offences of the ground so much as saltnesse: for what makes your Pigeons dung and you Pullens dung to be better for earable grounds then any other dung or meaneure whatsoever, but by reason of the saltnesse thereof, by which saltnesse also, you may iudge the strength and heate thereof, insomuch that the proper taste of fire, or any hot thing is euer salt; also wee say in Phylosophy, that blood which carieth the vitall heat and warmth of the body, is in taste salt, and so a nourisher, maintainer, and increaser of all the strength and vigour of the inward faculties; whereas Fleame, Choller, and Melancholly, which are the hurts and confounders of the vitall spirits; the first, is in taste sweet; the second bitter; and the last of an earthy and dry taste, full of much loathsomenesse.

Of steeping
Seed in
brine.

Now againe you shall vnderstand, that as you thus wet or steepe your Wheat seede, so you may also steepe any other

other seede, as Barley, Oates, Beanes, Pease, Lupins, Fetches, and such like; of which, your Beanes, Pease, and Lupins, you may steepe more then any of the rest, and your Oates the least. As touching Rye, it shall bee good not to steepe it at all, for it is a great enemy to all manner of wet and moisture, insomuch, that the curious Husband-man will forbear to sow it in any great shower of raine, bearing in his mind this ancient addage or saying, that *Rye will drown in the Hopper*: as on the contrarie part, Wheate would bee sown so moist, that it might sticke to the Hopper; yet notwithstanding, when you doe sow Rye in any of these In-land and cold barren Countries, where sand is not to bee gotten, you shall not by any meanes omit the sowing of your salt before, for it is nothing neere so moist as it is warme and comfortable.

CHAP. III.

Of the Ordering, Tylling, and Dressing of all rough Barren Clayes, whether simple or compound, being laden and ouerrunne with Gorse, Broome, and such like.

NEXT vnto these plaine barren earths, which by reason of their heights, are subiect in the Winter time to all manner of cold, frosts, stormes, tempests, blasts, and windes, which are the perfect hinderers of all increase and growth; & in the Sommer time to all hot scorplings, scaldings, and fierie reflections of the Sunne, which on the contrarie part, burneth and withereth away, that little seeming increase which appeareth about the earth: I will place that barren Clay, whether it bee mixt or vnmixt, which lying not so high, and subiect vnto those hurts and offences, seemeth to be a little more fruitfull, yet either

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by

by the extreme cold moisture thereof, or the stony hardnesse, and other malignant qualities, is no lesse barren then that of which I haue formerly written, which indeede is that barren and vilde soile, which will neither beare corne nor grasse, but is only ouer-run and quite couered ouer with great, thicke, and tall bushes of Gorfe or Furrer, which is a most sharpe, woody, and grosse weede; so full of pricks, that neither Horse, Beast, Sheepe, nor Goats dare thrust their noses to the ground to gather vp that little poore grasse which groweth thereon: And al-be these Gorfe, or Furrer, are one way a little commodity to the needfull Husband-man, in being a reasonable good fuell, either for baking, brewing, or diuers other sudden and necessary vses; yet, in as much as the profit being compared with the great quantity of earth which they couer and destroy, & which with good husbandrie might be brought to great fruitfulness, is indeed no profit at all; it shall not be amisse for euery good husband-man that is pestered and ouer-laden with such ground, to seek by way of good husbandrie how to reduce and bring it to that perfection and excellencie which may bee best for his owne particular commoditie, and the generall good of the kingdome wherein he liueth.

Then is there another kinde of soile which is nothing at all differing from this, but is euery way as barren and sterile, which is that ground which is ouerrunne with broome (which is as noysome a weed as the former) and though it haue not such sharpe prickles as the other, whereby to hinder the grazing of cattell; yet doth it grow so close and thicke together, and is naturally so poysonous and offensiuē to grasse; that you shall seldome see any grow where this Broome prospereth; besides the bitternesse thereof is so vnpleasant and distastfull

to all kind of cattell, that not any will euer crop or bite vpon the same, onely it is of some necessarie vse for the poore husbandman, in respect that it serueth him both for fuell, for thatching and the couering of his houses, (being for that purpose, of all, the longest lasting) and also for the making of Beesomes for clenſing of the house and barnes, or else for sale and commoditie in the market; all which profits (as before I said) being compared with the losse of the ground, and the goodnesse that might be reaped from the same, are indeed truely no profits but hinderances.

Therefore I would wish euery man that is Master of such grounds, whether they be ouerrunne with Gorse, Furres, Broome, or any such kind of grosse, woody, or substantiall weed: first, to cut vp the weed (of what sort soeuer it be) whether Gorse, Furres, or Broome) as close and neere vnto the ground as you can possibly, and then making them vp into sheafes or bigge faggots, carry them home and stacke them vp very dry, so as no raine may enter or pierce into them, for the smallest wet will rot and consumethem to dirt and filthinesse; which done, you shall make Labourers with hacks, picks, and such like tooles, to stubbe vp all the rootes which you left in the ground, euen to the very bottome of the same; and these roots you shall bee very carefull to haue stubbed vp exceeding cleane, by no meanes leauing (so neere as you can) any part or parcell of the roots behinde you; then those rootes thus stubbed vp, you shall diligently gather together into little heapes as bigge as Moale-hilles, and place them vpon the grounde a pretie distance one from another, and so let them lye till the Sunne and Winde haue dried them: for it is to

Destroying
of weeds.

be intended, that this labour must begin about the latter end of Aprill, and beginning of May.

**Burning of
Baite.**

Then so soone as you find these rootes are thorowly dried, you shall pile them handsomely together, laying them a little hollow one from another, and then with a hack cut vp some of the same earth, and therewithall couer all the rootes quite ouer, onely leauing a vent hole at the top, and on one side, and so let the hills rest two or three daies, till the earth be a little partcht and dried, then take fire and some other light drie fuell which is aptest to blaze, and with the same kindle euery hill, nor leauing them till you see them perfectly on fire: which done, let them burne both day and night, till the substance being wholly consumed, the fire goe out of it owne selfe, and this in some Countries is called the *Burning of Baite*.

**Breaking
of the burnt
earth.**

Now as soone as the fire hath beene extinguished for two or three daies, you shall then come, and with shouels (and beetles to breake the hard burnt earth in pieces) you shall spread all the ashes cleane ouer the ground; which done, you shall with a very long Plow teare vp the earth into gear and deepe furrowes, and diuide into Lands as you shall thinke meet and conuenient, laying them higher, or flatter, as you shall haue occasion, and as the ground lyeth more or lesse within the danger of water, whether it bee the overflowing of some neere neighbouring brookes or riuers, or else other standing water occasioned by raine and extraordinarie showers, which must be carefully lookt vnto, because all overfloues and inundation of water, is a mightie destroyer and consumer of grain; but these barren grounds of which I now write, are very feldome oppress'd with water; for most commonly they lye so high, that the continuall drynesse thereof, is a strong

**Causes of
unfruitful-
nesse.**

strong occasion of the much vnfruitfulnesse. After you haue thus burnt your baite, and plowed vp your ground, you shall then with your hackes hacke it into small pieces, in such manner as was declared in the former Chapter; then you shall (if the Sea be anything neere you) sand it with salt sand (as before said) then lime it, and after, manure it either with Oxe dung, Horse dung, rotten Straw, mudde of Ponds and Ditches, the spyteling of House-floores, or sweepings of Channels and Streets, or such like, or for want of all these in case you dwell neere vnto the Sea-coast (where manure for the most part is in greatest scarcitie, and the hardest to bee come by) you shall gather from the bottome of the rockes (where the seydge of the Sea continually beateth) a certaine blacke weed, which they call Hempe-weede, hauing great broad leaues, and growing in great abundance, in thicket tufts, and hanging together like Pease-straw; and with these weeds, you shall couer your lands all ouer of a pretty good thicke, and then forthwith you shall plow it againe somewhat deeper, and with somewhat greater furrowes then before, raising vp the new quicke earth to intermingle and mixe with those manures and helpes which you had formerly prepared and laid vpon the ground; then shall you againe hacke it and harrow it; then shall you take Pigeons dung, or Pul-lens dung (that is, any kind of land fowle whatsoeuer, but by no meanes any water fowle) or Pigeons dung and Pul-lens dung mixt together, and allowing to euerie acre two or three bushels thereof, which is the true quantitie of seed proportioned for the same, and this dung being broken and made into small pieces, you shall put into your Sydlop or Hopper, and in the same manner as you sow your corne, you shall sow this dung vpon the ground, and

An excel-
lent mea-
nure.

Of Plow-
ing.

Of diuers
manures.

Mixture of
manures.

then immediatly after it, you shall sow your Wheate; either steept in brine, or salt Sea-water, or vnsteept, as you shall thinke good, but in case you can neither get salt sand nor Sea-Rocke weedes, then you shall by no meanes omit the steeping of your Seede; neither shall you faile before you sow your seede, to mixe with your Pigeons and Pullens dung, a full equall part of Bay-salt well dried and broken, and so sower with the dung vpon the land, and then the seede after it; which done, you shall harrow it againe, clot it, sleight it, and smoth it, in such sort as was formerly declared in the former Chapter, for these labours haue no alterations, but must in all points be done as was before set downe.

Of weeding.

Now touching the weeding of this earth, after the Corne beginneth to grow aboue the ground, there is no feare to be had either of Thistles, Tares, Cockles, Darnell, Docks, and such like strong weeds, which indeed are the issues of good grounds ill ordered and handled: But the weeds which you shal most feare in this place, is yong Gorse, or Furs, or else yong Broome, which are very apt to grow from the least part or parcell of roots that shal be left behind; nay, the very nature of those barren earths is such, that of its own accord it wil bring forth those weeds, the cold sharpnes of the ayre mixing with the sterilitie and roughnes of the earth, being the cause that it will giue life to no other better plants; therefore so soone as you shall behold any of them to appeare aboue the earth, though they be not halfe a finger high, you shal presently; with all diligence, pull them vp by the roots and cast them away, or lay them in heapes that they may be afterwards burnt, and the ashes sprinkled vpon the ground: and herein is to be obserued, that the yonger and the sooner that you do pull vp these weeds, the better it is, and the easilier they

they will come from the earth, and the sooner bee destroyed : for all those mixtures wherewith alreadie you haue beene taught to mixe your earth, are in themselves such naturall enemies to all these kind of barren weeds, that should you omit the manuell labour of destroying them (which no good husband willingly will do) yet in time the earth of it selfe, and the often plowing of the same would leaue no such offence of weeds or other growths which might hinder the Corne.

Now touching the best time when to pull away these weeds, though generally it must bee done as soone as they do appeare about the ground ; yet it shall not bee amisse for you to deferre the worke till after a shower of raine, and then immediatly after the ground is wet (and so by that meanes more apt and willing to open and forsake the roots fastened within it) you shall with all diligence pull them out of the ground, and destroy them : neither shall you pull them out of the ground with your hands onely ; for the Gorse haue exceeding sharpe pricks, so that with your naked hands you are not able to touch them, and to arme your hands, against them, with strong thicke gloues, would be too boistrous and combersome, so that sometimes you might either misse the weeds, and pull vp the Corne ; or else pull vp the Corne and weeds both together ; therefore to prevent all these casualties or hinderances, you shall take a paire of long small woden Nyppers, made after the forme of this figure.

Time for
weeding.



And

And with these you shall pull the weeds out of the ground, and cast them into the furrowes by the sides of the Lands, till your daies worke be finished, and then with a rake you shall rake them together, and so lay them in heapes, to drie and wither, in more conuenient places, that when time shall serue, you may burne them and vse them, as was before declared.

Gathering
of stones.

Lastly, you shall haue great respect, that if this ground be very much troubled with loose stones, as flint, pible, and such like, that then you very carefully get them gathered from the ground, both before and after you haue plowed it, and to lay them on heapes in other vacant places, where they may serue for pauings, and such like purposes when time requireth: but if the ground be ouerrunne with great or else small limestones, as for the most part these barren grounds are; then shall you with all care gather them vp, and lay them in great heapes in some corner of your field where you may make a conuenient lime-kilne, and so there burne these stones thus gathered, which will be both an infinit profit, and an infinit ease to the rest of your labours.

CHAP. IIII.

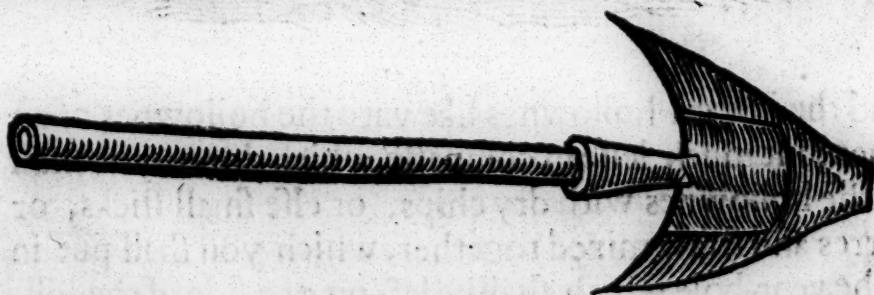
Of the Ordering, Tilling, and Dressing of all rough barren Claves, whether simple or compound, that are ouerrunne with Whinnes, and such like.

NEXT vnto this barren Clay which is ouerrunne with Furres, Broome, and such like, I will place that barren and vsfertill earth, being also a Clay, whether simple or compound, which is ouerrunne onely with Whinnes, as indeed bearing little or no other burthen, or if it doe beare any other burthen, as some little short mossie grasse,

grasse, yet is that grasse so couered ouer with these sharp Whinnes, that not any beast dare put his nose to the ground, or bite vpon the same; and indeed, this kind of earth is not any whit at all lesse barren then those of which I haue already written: but rather more, in that the malignant qualities thereof are not so soone corrected, nor yet the vertues so soone restored.

Whinnes are a certaine kind of rough dry weedes which grow bushie and thicke together, very short and close vnto the ground, being of a darke browne colour, and of crooked growth, thicke and confused, and full of knots, and those knots armed with hard, long, sharpe pricks, like thornes or bryars, they haue little browne leaues which shadow the prickes, and doe winde their braches so one into another, that they can hardly be separated, yet is their growth at any time little more then a handfull aboue the earth, only they spread exceedingly, and will runne and couer ouer a whole field, choaking vp all sorts of good plants whatsoeuer, and turning the best grasse that is to mosse, and filthinesse; wherefore if at any time you be Master of any such naughtie and barren ground, and would haue it reduced vnto goodnesse and fertillitie, you shall first take a fine thinne paring-shouell made of the best yron, and well steeled, and hardned round about the edges, according to the forme of this figure following:

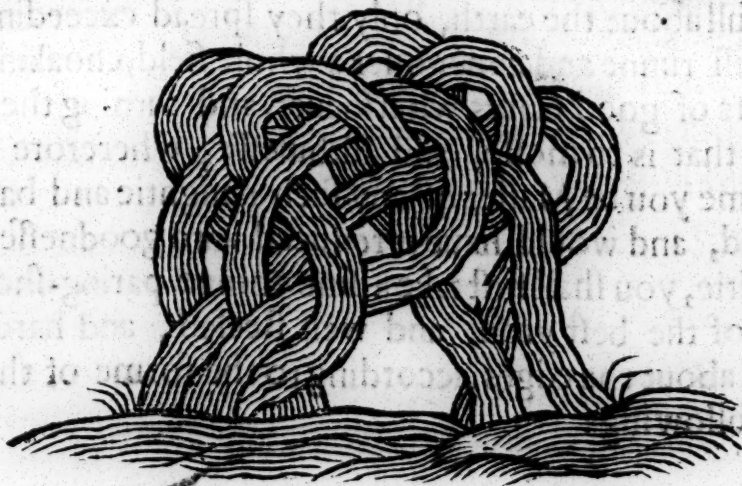
What
Whinnes
are.



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And

And with this paring-shouell, you shall first pare vp all the vpper swarth of the ground, about two inches, or an inch and a halfe thicke at the least, and euery paring would be some three foot in length at the least, and so broad as the shouell will conueniently giue it leaue, and this swarth thus pared vp, you shall first turne the whinny or grasse side downward, and the earth side vpward, and so let it lye two or three daies in the Sunne to dry (for this worke is intended to begin in the month of May) and when that side is well dried, you shall turne the other side, and dry it also; then when all the swarth is dried, you shall gather sixe or seuen pieces together, and turning the whinny or grasse side inward, and the earth side outward, you shall make round, hollow little hils thereof much what according to the fashion of this figure following:



And the inward hollownes like vnto the hollownes of an Ouen, but much lesse in compasse, which done, you shall fill the hollownes with dry chips, or else small sticks, or Furres and straw mixed together, which you shall put in at the vent-hole which shall be left on one side of the hill, and

and then kindling it with fire, you shall burne all that swarth in such sort as you burnt the roots of your Furres and Broome before; for this is also called a burning of Baite, as well as the former; for it is a most principall nourisher of the earth, and a very sudden destroyer of all malignant weeds whatsoeuer.

After the burning of your hills, as soone as the fire is vtterly quenched and gone out, and no heate at all left in the hills, you shall then with clotting beetles beate them all downe to dust, and then with shouels you shall spread the ashes quite ouer all the ground, as was before declared in the former Chapter: and herein is to be noted, that you must place these hills as thick and close together as by any meanes possibly you can, making your hills so much the lesse and lower, that they may stand thicker and neerer together, and so couer more ground, and thereby the heate and strength of the fire to disperse it selfe ouer all that piece of ground; for the fire burning vpon the ground, doth as much good for the enriching of the earth, and destroying of the weeds, as the ashes doth which are spread vpon the same.

Breaking of
Baies.

Now after your Baite is in this manner burned and spread, you shall then (as was before shewed) plow vp your ground in good large furrowes, then hacke it very small, sand it, lime it, and measure it; and of all measures, there is not any better for this ground then Oxe dung and ashes well mixt together; of which ashes, those of Beane-straw, Pease-straw, or any other straw, are best; those of Wood or Ferne next, those of charcoale next, & those of Seacoale or pitcoale are the worst of all: Swines dung is not much amisse for this ground; for though it be a great breeder of weeds and thyistles in good or fertile grounds, yet in this cold hard and barren earth it

Plowing.

worketh no such effect, but is a great comforter, and warme moistner of the same.

After you haue thus made your ground; as soone as wheate seede-time commeth, which is the latter end of September, and beginning of October, you shall then with great care plow ouer your ground againe, and take great respect that you turne vp your furrowes much deeper then before, and that for two especiall causes; the first, that the new earth may the better mixe with the old earth, and those helps that are added thereunto; and secondly, that you may be surer to teare vp the roots of all the Whinnes from the very bottome of the earth, not suffering any part of them to remaine behind: and for this purpose it shall not be amisse to haue an idle Boy or two to follow you plow, and to gather away all the roots that shall be torne vp, or any way else left bare aboue ground, which roots shall bee laid on heapes in conuenient places, and then after burnt, and the ashes thereof spared vpon the ground, which will be a very great comfort vnto the seed, being a speedie helpe vnto the sprouting thereof, and a very warme comforter of the root after the stemme is spindled aboue ground, for in these cold barren earths, nothing doth so much spoile and slay the Corne, as the dead coldnesse which lyeth at the root thereof; for in many of these vnfertill places, you shall see Corne at the first sowing (whilest there is a little strength in the ground) sprout in great abundance, promising much hope of the profit; but when it should spindle and come to much better perfection, that poore strength being spent and consumed, and the cold and drynesse of the soile, hauing as it were overcome all matter of comfort, then presently you shall see the blade of the Corne turne yellow, the stemme or stalke to wither, and
either

either put forth no eare at all, or else a very poore little empty one, being laden with nothing but a most dry chaffie huske without substance. But to come againe to our purpose, after you haue thus plowed vp your ground the second time, you shall then hacke it againe, and harrow it, as was declared in the other former Chapters; then you shall take your seed-wheate which hath beene steeped either in brine or Sea water, and to euery bushell of that seede, you shall adde a bushell of Bay salt, and mixe them very well together in your Hopper or Sydelop, and so sow them together vpon the ground, obseruing to double your casts so oft, that you may not faile to cast that true quantitie of seed into the earth which otherwise you would haue done if so be there had beene no mixture at all, for to doe otherwise were to deceiue the ground, and a handfull of seed so sated, would be the losse of a pecke in the time of Haruest; therefore haue great respect that your ground haue his due, for it is no more cost though it be a little labour.

When your seed is sowed, you shall harrow it againe the second time, clot it, smooth it, and sleight it, as was before declared in the former chapters. Harrowing,

As touching the weeding of this ground, it is the least labour of all other, for the earth being so corrected as is before shewed, it will naturally of it selfe put forth no weeds, especially if you remember to plow it deepe, and be sure to teare vp and gather away all the quicke roots, otherwise if that labour be any thing neglected, then will it put forth both Whinnes, and great store of other rough weeds, which as soone as you shall perceiue to appeare, you shall presently with your wooden Nyppers pull them vp by the roots, as was at large declared in the foregoing chapter. Weeding.

Profits.

Now for the generall profit of this ground thus made and prepared, it is the same that the two former are, that is to say, it will beare you good and sufficient Wheate, in plentifull abundance for the space of two or three yeares, then Barley a yeare after; then Oates three yeares together after the Barley; and Pease or Beanes a yeare after the Oates; then lastly, very good Meadow or Pasture, for the space of three or foure yeares after, and then you shall begin and dresse it againe, as was formerly declared.

CHAP. V.

Of the Ordering, Tilling, and Dressing of all barren Claves, whether simple or else compound, which are over-runnewith Ling, or Heath.

THere followeth now successiue, another sort of barren Earth, which indeede is much more sterile and barren then any of the other formerly written vpon, because they, out of their owne natures, do beare a certaine kind of grasse or food which will relieue ordinary, hard, store-Cattell, whether it be sheepe, goats, or yong beasts. But this earth of which I am now to intreate, beareth no grasse at all, but only a vilde, filthie, black-browne weede, which wee call Ling or Heath, the tender tops whereof Cattell and wild Deere will sometimes crop, yet it is to them but little reliefe, and onely maintaineth life and no more. Now al-be some may obiekt vnto me, that this kind of soile is euer a sandy soile and no clay, as may be seene in most chases, forests, and downes: yet I answer, that al-be it hold so in generall; yet there are diuers Claves, especially in mountainous Countries, that are pestered with these kind of weedes, as may be seene in the North
and

and North-West parts of Devonshire, in some parts of Cornwall, and in many parts both of North and South Wales; and these Clay grounds which are thus offended with these weedes of Ling or Heath, are much more barren and vnfruitfull then the sands, because of their much more coldnes; yet those clayes which are mixed with either blacke sand, dun sand, or yellow sand, and ouer-run thus with Heath or Lyng, are the most barren of all: to make any further description of this Heath or Lyng, being a thing so notoriously knowne ouer all this kingdome, I hold it meere needlesse, onely to say it is a rough browne weed, shooting out abundance of stalkes from one root, with little darke leaues, and flowers on the toppe, of a pale reddish colour, much inclining vnto Peach colour at the first, but being full blowne, they are then a little more whitish.

You therefore that haue any such ground, and desire to bring it to fruitfulness, and the bearing of good corne and grasse in a reasonable abundance; you shal first with sythes or sharpe hooks (but old sythes are the better) cut downe all the Heath, or Lyng which groweth vpon the earth you intend to conuert to goodnes, so neere the ground as possibly you can; then when it is cut downe (which would euer be at the beginning of the Month of May) you shall let it lye vpon the ground, dayly tossing and turning it till it become very dry, then spreading it all ouer the ground, and mixing or couering it with dry straw of any kinde whatsoeuer, you shall presently set it on fire in so many seuerall corners of the field, that all the seuerall fiers in the end may meet in one point, and not leaue any part of the mowen Heath or Lyng vnburnt, or any part of the ground vnscorched; after this is done, and the ground cooled, you shall with your flat clotting beetles beate

Destroying
of heath.

the

Another
burning of
Baite.

the ashes hard into the ground, then you shall take a strong plow, with a broad-winged share, and an euen colture, and you shall plow vp all this ground thus burnt, in very large and deepe furrowes, by no meanes picking out any of the quicke roots which shall remeane in the furrowes so turned vp, but letting them rest in the earth still, then with your hacks, and the helpe of your yron paring shouell, you shall cut vp the furrowes, formerly turned vp, into short pieces of three foot, or three foot and a halfe long, and some lesse, as occasion shall serue; then with these pieces, you shall build little hollow hills, such as in the former Chapter you made of the vpper swarth of the ground onely; and then filling the hollownesse with dry heath, and dry straw mixt together, you shall set euery hill on fire, and so burne the very substance of the earth into ashes, which will soone be done by reason of the infinit number of roots and small strings which lye mixt in the earth, and the drynesse thereof occasioned by the former burning: And this is another kind of burning of Baite much differing from all the former, and yet to as great end and profit as any whatsoeuer, & these hills must as the former, bee placed one as neere another as is possible, so as they may spread and couer ouer the greatest part of the ground, and leauing no more then a good reasonable path to passe betweene hill and hill.

Now as soone as you haue thus burned all your Baite, and that your hills are cold, you shall then as was before shewed in the former chapters, with beetles and shouels breake downe the hills, and spread the earth and ashes ouer all the ground; which done, you shall sand it (if the situation of the ground bee answerable thereunto) and lime it in such sort as was shewed in the second chapter; then when it is lymed, and the lyme equally spread, not
more

more in one place then in another, you shall then meanure it with the best meanure you can prouide, of which there is none better or more proper for this ground then mans ordure, and the rubbish, sweepings, parings and spyttings of houses mixt together, or for want of this (because it may not be in so great plenty as other meanures) you may take either old Oxe dung, or Horse dung, or for want of them, the old rotten and mouldy staddles or bottomes of Corne-stacks, or reeds; especially Pease-stacks, or Beane-stacks, provided that it bee thorowly rotten, for the lesse rotten it is, the worse it is: Also the scowrings of common Sewers, and especially those through which much of mans vrine doth passe, is a most wonderfull and beneficial meanure for these grounds, so are also the scowrings of sinkes and channels which come from Kitchens and wash-houses, where great store of Brine and salt broth is shed, and other greasie, fat and putrified substances, as also abundance of sope suddes, and buck-ashes, and other sope and lee washings, then which there is no better meanure that can be vsed for these kinde of grounds.

After your ground is thus perfectly made and meanured, and that Wheat seede time doth draw on, which (as before was shewed) is euer at the latter end of September, you shall then plow vp your ground againe in that manner as was shewed for the former earths; to wit, much deeper then before: for you are to vnderstand, that this ground being drest as is before declared, there will remaine nothing of the furrowes which were first plowed vp but the ashes, which being couered with sand, lime, and meanure, the earth will lye plaine and leuell, so that of necessitie you must raise vp new furrowes of new earth, which being done, you shall then with your hacks, cut all the new earth into very small peeces; mixing them well

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with

with the other mould made of sand, lyme, meazure and ashes, then as was before said, you shall horrow it to make the mixture so much the better, and the mould so much the finer; and then if it haue beene sanded, you may sow your Seede-wheate simply of it selfe, without any doubt of the plentifull increase thereof; but if it haue not beene sanded, then as in the fore-going Chapter, you shall not onely steepe your Seede in Brine (as before shewed) but also you shall mixe your Seede with Bay-salt, and so sowe it into the ground; or if at the time of sowing (after it is plowed, hackt and harrowed) you bestow or Pigeons dung, or Pullens dung, or sheepes dung vpon the Land, it will bee much better, and the Corne will giue a much greater increase. Now as soone as your Land is sowne, you shall then forthwith harrow it againe and couer the Seede very close, then you shall clot it, smooth it, and sleight it (as was before shewed.)

Of Wee-
ding.

As touching the weeding and clenning of this earth after the Corne is sprung vp, you shall vnderstand that there is great care to bee had thereunto, for this ground is much subiect vnto weedes, and those of the worst kinde: for although for the most part it will be free from all manner of soft and tender weeds, as thistles, cockle, darnell, ketlocks, docks, rape, and such like herball stuffe; yet is it much subiect to twitch Bryars, which grow at both ends, lyng, wyld time, and such like, any of which as soone as you shall see appeare or peepe aboue the earth, you shall presently with your Nippers pull them vp by the rootes, and not suffer them in any wise to looke a handfull aboue the ground, for if you doe, their hardnesse is so great, and their rootes so large and fast fixt in the mould, that you can by no meanes pull them away without great losse and hurt to the graine, pulling vp with them all such
rootes

rootes of Corne, as shall bee fixed neere about them: for any other weake and superfluous things which shall grow from the Land, you may with ordinary weeding hookes cut them away; as for long grasse, whether it bee soft or seggy, or any other such like stuffe, you shall not stirre it but let it grow, for it keepeth warme the roots of your corne, and giueth nourishment and increase thereunto: Now for the profit of this soyle thus ordered and husbanded it is equall with any of the former, and will beare Wheate very plentifully for the space of the three first yeares; good Barley the fourth yeare, with the helpe of the sheepe fold (as was before said;) and good Oates the fift, sixt, and seuenth yeares; and very good small Pease the eight yeare, (for Beanes this Soyle will very hardly beare at all) and the ninth, tenth, and eleuenth yeare it will beare very good meadow (though not altogether very fine pure grasse, yet very good feeding and wholesome grasse) or so good pasture as a man can reasonably require for any holding Cattell whatsoeuer; nay, it will also indifferently well feede, and fat Cattell, though peraduenture it requireth a little longer time then other finer grounds will.

CHAP. VI.

Of the Ordering, Tylling, and Dressing of all plaine, simple barren Sands, bearing nothing but a short mossie grasse.

HAuing thus (in as large manner as I hope shall be needfull for any iudiciall or indifferent Reader) written of the Natures, Orderings, Plowings and Dressings of all manner of barren and vnfruitfull Claves, whether they bee simple of themselues, or else compounded with other earths, as sands, chalkes, grauels,
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and

and such like; shewing by those naturall burthens which continually of their owne accords, they produce, (which indeede is the easiest and safest way of knowledge) how to amend and better them and bring them to that perfection of fruitfulnessse, that the best earth shall but in a very small degree exceede them, nay hardly any thing at all, except in the saving of a little charge and some labour, without which nothing is to be obtained by the Husbandman; neither is this charge or labour thus bestowed on these barren grounds to be grutcht at by any honest minde; since the worst crop of tenne or eleuen, will make good his charge and toyle with a reasonable interest; so that I make account, nine or tenne yeares profits come into his Barnes without purchase, for it is to be intended that all these earths formerly spoken of, are not to be drest or to put the Husbandman to any charge more then the first yeare of tenne or eleuen, for the second yeare he shall assoone as he hath gathered his Wheate off, which will bee in August, and finisht other parts of his haruest, presently put his Plow into the same Wheate-ground againe and Plow it vp, hack it, harrow it, sowe it, harrow it againe, clot it, and weede it, as in the former yeare, and so consequently of all the yeares following, whereby you perceiue that all labours and charges are saued more then once plowing and sowing.

This then considered, it necessarily now followeth that I speake of the bettering and bringing into perfection of all manner of barren Sand-grounds, being simple of themselves, without any mixture of other earths, except one and the same kind, as sand with sand, though peradventure the colours of the sands may alter; as red with white, yellow with blacke, &c. which in as much as the whole substance is sand without any contrary mixture, therefore

therefore it may well bee called simple and not compound: and of these sands, I purpose to intreate, as formerly I did of the Clayes; that is to say, by their outward faces and Characters, which are those burthens and increase which of their owne proper natures without any help or compulsion they produce and bring forth into the world. And first of that naughtie cold and barren sand, which lying vpon high, stony and mountainous Rocky places, or else vpon lower cold bleake Plaines, subiect to the North and North-East windes and tempests, or bordering vpon the Seas, doth not bring forth any thing but a short mossie grasse which the Sunne maketh bitter, and the cold dewes fulsome and vsauory in tast. If any man then bee Master of such vnprofitable and vnfruitfull earth, and desire to haue it brought to goodnesse and perfection, hee shall, First, at the beginning of the Spring, as about midde Aprill or earlyer, with a strong Plow answerable to the soyle, yet somewhat lesse both in timbers and yrons then that wherewith you plow your Clay grounds: you shall plow so much of that earth vp as you may conueniently compasse to sowe and dresse exactly and perfectly; for to vndertake more, were to make all vnprofitable, and to cast away much labour and charge without any profit; this ground you shall plow of an indifferent depth, though not so deepe as the Clayes, and you shall lay the furrowes though flat, yet close one to another, without leauing any balke betweene, but plowing all very cleane; yet not so very cleane and close together, that you may lay the greene swarth to the new plowed or quick earth; but rather turne one swarth against another, so as the furrowes may lye, and no more but touch the edges one of another: This when you haue done, you shall then with your haks cut and breake all

Plowing.

the earth so turned vp into very small peices, and not onely the earth so turned vp, but also all other greene swarth which was left vnplowed; prouided, that before this labour of hacking, you let the ground lye certaine daies in the forrowes, that one swarth heating and scalding the other, they may both equally rot and grow mellow together, which once perceiued by the blacknesse thereof, you may then at your pleasure hack it and cut it as is before declared.

Obiection. Now some may in this place obiect vnto mee, that this labour of hacking should bee needlesse, in as much as all sand grounds whatsoeuer are out of their owne natures so light, loose, and willing to disseuer, that this toyle might very well and to good purpose bee faued.

Answer. To this I answer, that true it is, most sands in their owne natures are loose, and light, and willing to disseuer into fine mold without any extremity, especially rich and fruitfull sands, whose predominant qualitie of warmth giueth nourishment and increase; but these barren and cold sands, in which is a certaine flegmatique toughnesse and most vnwholesome drinesse, are of a cleane contrary nature, and through the stony hardnesse thereof, they are as vnapt to breake and disseuer as any Clay whatsoeuer: besides, the swarth being of a tough mossie substance (which euer carrieth a hard strong roote answerable with the cold in which it is ingendred) doth so constantly binde, fetter, and hold the mold together, that it is impossible for any harrow to breake it in peeces, or to gather from it so much mould as may serue to couer the Corne and giue it roote when it is sowne into the same; and therefore this work of hacking is necessary.

When therefore you haue thus hackt your Land,
and

and distributed the mold into many small pieces, you shall then with all expedition marle it, which forasmuch as it is no generall or common practice in euery part of this Kingdome, I will first tell you what Marle is, and then how to find it, digge it, and vse it for your best behoofe.

Marle, you shall then vnderstand is (according to the definition of Master *Bernard Pallisy*) a naturall and yet an excellent soyle, being an enemy to all weedes that spring vp of themselues, and giuing a generatiue vertue to all seeds that are sowne vpon the ground, or (for the plaine husbandmans vnderstanding) it is a certaine rich, stiffe and tough Clay, of a glewie substance and not fat or Oylie as some suppose. This Marle is in quality cold and drie and not hot (as some would haue it, and it was earth before it came to be Marle, and being made Marle yet it is but a Clay ground; all Chalk whatsoever was Marle before it was Chalk, and all manner of Stones which are subiect vnto Calcynation or burning, as Lyme-stone, flint, or the like, were first Marle before they were stones, and onely hardned by accident and so not possible to be dissolued but by fire: as for Marle it selfe when it is a little hardned it is onely dissolued by frosts and nothing else, and thence is the cause that Marle euer worketh better effects the second yeare then the first; This Marle hath bin made so precious by some writers that it hath beene accounted a fift element, but of this curiosity I will not now dispute.

Touching the complections or colours of Marle, there is some difference, for though all conclude there are foure seuerall colours in Marle, yet one saith, there is a white, a Gray or Ruffet, a Black and Yellow; another saith, there is a Gray, a Blew, a Yellow and a Red; and a third saith, there is a Red and white mixt like vnto porpherie;

Of Marling.

Additions.

*Marle
defined*

pheric, and all these may well be reconciled, and the colours may alter according to the Climat and strength of the Sunne: So that by these Characters the colour, the toughnesse, and the loosenesse when it is dried, any man of iudgement may easily know Marle from any other earth whatsoeuer. This Marle is so rich in it selfe, and so excellent for continuance, that it will maintaine and enrich barren grounds, the worst for ten yeares, some for a dozen, and some for thirty yeares; yet there is a great respect to bee had in laying of this Marle vpon the ground, that is to say, that you lay it neither too thick nor too thinne, that you giue it neither too much, nor too little, for any of these extremities are hurtfull; and therefore hold a meane, and see there bee an indifferent mixture betweene the Marle and the earth, on which it is laid.

For the generall finding out of this Marle, there is no better way for readinesse and the sauing of charges, then by a great Augure or wimble of Iron made to receiue many bits one longer then another, and so wresting one after another into the ground to draw out the earth till you finde you are come to the Marle, which perceived and an assay taken, you may then digge at your pleasure.

Now for the places most likely where to finde this Marle, it is commonly found in the lowest parts of high Countries, neere Lakes and small Brookes, and in the high parts of lowe Countries, vpon the knols of small hils, or within the Clifts of high Mountainous banks, which bound greater Riuer in: to conclude, you shall seldom finde any of these barren sands, but they are either verded about with Marle grounds, or if you will bestow the labour to digge below the sand, you shall not faile to find either Marle or some quarrie of stone, or both; for in some places Marle lyeth very deepe, in other some places

places within a spades graft of the vpper swarth of the earth : Therefore it shall be good for you to make prooffe of all the most likely parts of your ground to find out this Marle ; and as soone as you haue found it out , you shall with Mattocks and Spades digge it vp and carry it to your land, there laying it in bigge round heapes, and setting them within a yard or two one of another ; thus when you haue filled ouer all your ground (which would be done with as great speed as might be, for the ancient custome of this Kingdome was, when any man went about to Marle his ground, all his Tenants, Neighbours and friends would come and helpe him to hasten on the worke) you shall then spread all those heapes, and mixing the Clay well with the Sand, you shall lay all smooth and leuell together ; and herein is to be obserued, that if the land you thus marle shall lye against the side of any great Hill or Mountaine, whereby there will bee much descent in the ground, then you shall (by all meanes lay double as much marle, sand, or other compasse on the top of the hill as on the bottome, because the raine and showers which shall fall will euer wash the fatnesse of the earth downe to the lowest parts thereof.

Now in the laying of your Marle, you are to hold this obseruation, that if you lay it on hard and binding grounds, then you are to lay it in the beginning of Winter, but if on grounds of contrary nature, then it must be layd in the Spring or Sommer. Againe, you shall obserue, that if you cannot get any perfect and rich Marle, if then you can get of that earth which is called Fullers earth, and where the one is not, commonly euer the other is, then may you vse it in the same manner as you should do Marle, and it is found to be very neere as profitable.

Additions.
*Obseruati-
 ons.*

Of Chalke,
and the vse.

When your ground is thus marled (if you be neere to the sea-side) you shall then also sand it with salt sea-sand, in such sort as was formerly declared, onely you may forbear to lay altogether so much vpon this sand ground as you did on the Clay ground, because an halfe part is fully sufficient. If you cannot come by this salt-sand, then in stead thereof, you shall take chalke, if any bee to bee had neere you, and that you may lay in more plentifull manner then the sand; and al-be it is said, that chalke is a wearer out of the ground, and maketh a rich father, yet a poore sonne, in this soile: it doth not so hold, for as it fretteth and wasteth away the goodnesse that is in Clay grounds, so it comforteth and much strengtheneth these sand earths: and this chalk you shall lay in the same manner as you did your marle, and in the same manner spread it and leuell it; which done, you shall then lime it as was before shewed in the Clay grounds, yet not so abundantly, because also a halfe part will be sufficient; after your liming, you shall then meASURE it with the best meASURE that you haue, whether it be dung of Cattell, Horse, Sheepe, Goats, straw, or other rubbish; and that being done, and seed-time drawing on, you shall then plow vp your ground againe, mixing the new quick earth and the former soyles so wel together, that there may be little distinguishment betweene them; then you shall hacke it againe, then harrow it, and lastly sow it with good, sound, and perfect seed, and of seeds though Wheate will very well grow vpon this earth, yet Rye is the more naturall and certaine in the increase: yet according to the strength of the ground, you may vse your discretion, obseruing that if you sow Wheate, then to steepe it before in brine or salt-sea-water, as was before described; but if you sow Rye, then you shall sow it simply without any helpe, except

cept it be Pigeons dung, or Bay-salt simple of it selfe, in such manner as hath beene before declared; either sowing the salt with the corne, or before the corne, as shall seeme best in your owne discretion.

After your seed is sown, you shall then harrow it againe, clot it, smooth it, and sleight it as before shewed in the second chapter, which done (after the corne is shot about the earth) you shall then look to the weeding of it, being somewhat a little too much subiect to certaine particular weedes, as are Hare-bottles, wyld Chesse-bolles, Gypsy flowers, and such like, any of which, when you see them spring vp, you shall immediatly cut them away close by the roots, as for tearing their roots out of the ground with your Nyppers, it is not much materiall, for the cutting of them is sufficient, and they will hardly euer againe grow or do you hinderance, many other weedes there may grow amongst these which are also to be cut away, but these are the principall, and of most note; wherefore as soone as you haue clensted your lands of these and the rest, you shall then referre the further increase of your profit vnto Gods prouidence.

Lastly, you shall vnderstand that this ground being thus plowed, drest, and ordered, will without any more dressing, but once plowing and sowing, euery yeare beare you good Wheate or good Rye three yeares together; then good Barley the fourth yeare; good Oates the fift, sixt, and seventh yeare; excellent good Lupins the eighth yeare, and very good Meadow or Pasture three or foure yeares after, and then it shall be necessarie to dresse it againe in such manner as was before described.

The Profits

CHAP. VII.

Of the Plowing, Tilling, Ordering and Inriching of all barren Sands which are laden and ouer-runne with Braken, Ferne, or Heath.

NEXT vnto this plain, cold, barren Sand, which beareth no other burthen but a short mossie grasse; I will place that Sand which is laden and ouerrunne with Braken, Ferne, or Heath, as being by many degrees more barren then the former, both in respect that it is more loose, and lesse substantiall, as also in that it is more dry and harsh, and altogether without nutriment, more then an extreame sterile coldnesse, as appeareth by the burthen it bringeth forth, which is Braken or Ferne, a hard, rough, tough weed, good for nothing but to burne, or else to lyster store-beasts with, for the breeding of meazure; or if you strow it in the high-ways where many travellers passe, it will also there turne to good reasonable compasse.

Of destroy-
ing Braken.

Of this kind of ground if you be Master, and would reduce it vnto fertilitie and goodnesse, you shal first, whether the Braken be tall and high (as I haue seene some as high as a man on horse-backe) or short and low (as indeed most commonly these barren earths are, for tall Ferne or Braken shewes some strength in the ground) you shall with sythes first mowe it downe in the month of May, then wither and dry it vpon the ground, and after spread it as thinne as you can ouer all the earth you intend to plow; which done, you shall bring your plow and begin to plow the ground after this order: first, you shall turne vp your furrow, and lay it flat to the ground, greene-swarth against greene-swarth, then looke how broad your furrow is so turned vp, or the ground it couereth, and

and iust so much ground you shall leaue vnplowed betweene furrow and furrow, so that your land may lye a furrow and a greene balke, a furrow and a greene balke, till you haue gone ouer all the ground, then shall you take a paring-shouell of yron, and pare vp the greene swarth of all the balkes betweene the furrowes, at least two ynches thicke, and into pieces of two or three foot long, and with these pieces of earth, and the dry Ferne which is pared vp with them, you shall make little round hollow Baite hills, as in the third and fourth Chapter; and these hills shall be set thicke and close ouer all the ground, and so set on fire and burnt; then when the fire is extinct, and the hills cold, you shall first with your hacks cut in pieces all the furrowes that were formerly turned vp, and then breake downe the burnt hills, and mixe the ashes and earth with the other mould very well together; which done, you shall then with all speed marle this earth as sufficiently as possibly may be, not scanting it of marle, but bestowing it very plentifully vpon the same; which done, you shall then plow it ouer againe, and plowing it exceedingly well, not leauing any ground whatsoever vntorne vp with the plow; for you shall vnderstand that the reason of leauing the former balkes, was that at this second plowing after the marle was spread vpon the ground, the new, quicke, and vnstirred fresh earth might as well be stirred vp to mixe with the marle, as the other dead earth and ashes formerly receiued, whereby a fresh comfort should be brought to the ground, and an equall mixture without too much drynesse, and this second Ardor or plowing would begin about the latter end of Iune.

After your ground hath beene thus marled, and the second time plowed, you shall then sand it with salt Sea-sand, lime it, and meanure it, as was declared in the foregoing.

going Chapter: and of all measures for this soyle, there is not any so exceeding good as sheepes measure, which although of the Husbandman it bee esteemed a measure but of one year, yet by experience in this ground it hapneth otherwise, and is as durable, and as long lasting a compasse as any that can bee vsed, and besides it is a great destroyer of thistles, to which this ground is very much subiect, because vpon the alteration of the ground the Ferne is also naturally apt to alter vnto thistle as we dayly see.

Plowing
and sowing.

When your ground is thus drest and well ordered, and the Seede-time commeth on, you shall then plow it againe, in such manner as you did the second time, that is to say, very deepe, cleane, and after the manner of good Husbandry, without any rest-balkes or other disorders: then shall you hacke it very well, then harrow it, and then sow it; but by mine aduice, in any case, I would not haue you to bestow any Wheate vpon this soyle (except it bee two or three bushels on the best part thereof for experience sake, or prouision for your household) for it is a great enemie vnto Wheate, and more then the marle hath no nourishment in it for the same, because all that commeth from the salt sand, lime, and measure is little enough to take away the naturall sterilitie of the earth it selfe, and giue it strength to beare Rye, which it will doe very plentifully; and therefore I would wish you for the first three yeares onely, to sow the best Rye you can get into this ground; the fourth yeare to sow Barley; the fift, sixt, and seuenth, Oates; and of Oates, the bigge blacke Oate is the best for this ground, maketh the best and kindlyest Oat-malt, and feedeth Horse or Cattell the soundest; as also it is of the hardest constitution, and endureth either cold

or

or drynesse much better then either the white Oate, the cut Oate, or any Oate whatsoever; the eight yeare, you shall onely sow Lupins or Fetches; and three yeares after, you shall let it lye for grasse, and then dresse it againe as before said; for it is to bee vnderstood, that in all the following yeares (after the first yeare) you shall bestow no labour vpon this ground more then plowing, sowing, hacking and harrowing at Seed-time only.

But to proceede to the orderly labour of this ground, after you haue sown your Rye, you shall then harrow it againe, clot it, smooth it, and sleight it, as was before shewed in the second Chapter of this Booke. And although a man would imagine that the sandy loosenesse of this soyle would not neede much clotting or sleighting of the Earth, yet by reason of the mixture thereof with the Marle and manure, it will so hold and cleave together, that it will aske good strong labour to loosen it and lay it so hollow and smooth as in right it should be.

Labours after sowing.

Touching the weedes which are most subiect to this soyle, they are Thystles, and yong Brakes or Fernes which will grow vp within the Corne, which before they rise so high as the Corne, and euen as it were at the first appearing, you must with your wooden Nypers pull vp by the roots, and after take vp and lay in some conuenient place where they may wither and rot, and so turne to good manure.

Weeding.

CHAP. VIII.

Of the Plowing, Tilling, ordering, and enriching of all barren Sands, which are laden and ouer-runne with Twitch, or wyld Bryar.



Destroying
of Twitch
and Bryar.

Having written sufficiently of this hard and barren, wast, wyld, sandy ground, which is ouer-run with Braken, Ferne, Heath, and such like: I will now proceed, and vnto it ioine another sand which is much more barren, and that is the sand that bringeth forth nothing but wyld Twitch, Bryars, Thorn-bush, and such like vndergrowth of yong misliking wood, which neuer would rise or come to profit, the bitter cold drynesse of the earth wherein it groweth, and the sharpe stormes to which the clime is continually subiect both day and night, blasting it in such manner that nothing appeareth but starued, withered, and vterly vnprofitable burthens, good for nothing but the fire, and that in a very simple sort. Such ground if you be master of, and would reduce it to profit and fruitfulnessse, you shall first with hookes or axes cut vp the vpper growth thereof, that is, the bushes, yong trees, and such like, then you shall also stubbe vp the roots, not leauing any part of them behind in the earth, carrying away both home to your house to be employed either for fuell, or the mending of the hedges, or such like, as you shall haue occasion; this done, you shall take a paire of strong yron harrowes, and with them you shall harrow ouer all the earth, tearing vp all the Twitch, Bryars, and rough grasse so by the roots, that not any part but the bare earth may bee scene, and when your harrowes are cloyed, you shall

shall vnlade them in seuerall places of the ground, laying all such rubbish of weedes and other stuffe, which the harrowes shall gather vp, in a little round hill, close vp together that they may sweat, wither and dry; then spreading them abroad and mixing them well with dry straw, burne them all ouer the ground, leauing no part of the weedes or grasse vncōsumed, then without beating in of the ashes, you shall presently plow the ground all ouer very cleane as may be, laying the furrowes as close as you can one to another, and leauing no earth vntoucht or vntorne vp with the plow, which done, you shall immediately hack it into small peeces, and as you hack it, you shall haue idle Boyes to goe by the Hackers, to gather away all the roots which they shall loosen or breake from the mould, and laying them on heapes in the worst part of the ground, they shall there burne them, and spread the ashes thereon; after your ground is thus harrowed, plowed, and hackt, you shall then mucke it, as was formerly shewed in the sixt Chapter, then shall you sand it, lime it, and measure it as before said.

Now of meanures, which are most proper for this soyle, you shall vnderstand that either Oxe, or Horse measure, rotten straw, or the scowring of Yards is very good, provided that with any of these meanures, or all these meanures, you mixe the broad-leaued weedes, and other greene-weeds which grow in Ditches, Brookes, Ponds or Lakes, vnder Willow tree, which with an Iron Rake, Drag, or such like instrument, you may easily draw vpon the banke, and so carry it to your land, and there mingle it with the other meanures, and so let it rot in the ground, this measure thus mixed is of all other most excellent for this soyle, both by the experience of the Ancients who haue left it vnto memory, as also by daily practise now
H vfed.

Meanurs.

used in sundry parts of this Kingdome, aswell because of the temperate coolnes thereof, which in a kindly manner asswageth the lime and sand, as also through the moisture which distilling through those warme Soiles doth quicken the cold starued earth, and giueth a wonderfull increase to the seed that shall be throwne into the same.

Harrowing
and other
labours.

After your grownd it thus sufficiently drest with these soiles and measures, you shall then plow it againe the second time, which would be after *Michaelmas*; after the plowing you shall then hack it againe, and be sure to mixe the earth and the measures very well together, then you shall breake it in gentle manner with your Harrowes, and then sow it; which done, you shall harrow it againe, but then you shall harrow it much more painefully, and not leaue any clots or hard earth vnbroken that the Harrow can pull in pieces: as touching the seede which is fittest for this earth, it is the same that is spoken of in the next foregoing Chapter: as namely, the best Rye or the best Massine, which is Rye and Wheate equally mixt together, or if there betwo parts Rye, and but one Wheate, the seede will bee so much the more certaine and sure holding, and this seede you may sow on this grownd three yeares together, then Barley, then Oates, and so forth, as is formerly writ of the grounds foregoing. After your ground is sowne and harrowed, you shall then clotte it, sleight it, and smooth it as you did the other grounds before, and then lastly with your backe Harrowes, that is, with a paire of harrowes, the teeth turned vpward from the ground, and the backe of the harrowe next vnto the ground, you shall ranne ouer all the ground and gather from the same all the loose Grasse, Twich, or other weedes that shall any wayes bee raised vp, and the same so gathered, you shall lay at the lands end in heapes,

heapes, either to rot for manure, or else at the time of the the yeare to be burnt for ashes, and sprinkled on the earth the next seed time.

Lastly touching the weeding of this soyle, you shall vnderstand the weedes which are most incident thereunto, are all the same you first went about to destroy : as namely, Twitch, rough wyld Grasse, and yong woody vndergrowth, besides Thistles, Hare-bottles, and Gipsie flowers ; therefore you shall haue a great care at the first appearance of the Corne, to see what weedes arise with it, (for these weedes are euer fully as hasty as the Corne) and as soone as you see them appeare, both your selfe and your people with your hands shall pull them vp by the rootes, and so weede your land as you would weede a garden, or Woad ground. Now if at this first weeding (which will bee at the latter Spring commonly called *Michaelmas*, or the Winter Spring) you happen to omit and let some weedes passe your hands vn pulled vp (which very well may chance in so great a worke) you shall then the Sommer Spring next following (seeing them as hie or peraduenture hie then the Corne) with your wooden nippers pull them vp by the roots from the ground, and so cast them away : As touching the cutting them vp close by the ground with ordinary weedhookes, I do in no sort allow it, for these kind of weeds are so apt to grow, and also so swift in growth, that if you cut them neuer so close in the Spring, yet they will againe ouermount the Corne before haruest, and by reason of their greatnes, roughnes, and much hardnes choake & slay much Corne that shall grow about them, and therefore by all meanes you shall pull these weeds vp by the roots whilst they are tender, (if possibly you can,) or otherwise in their stronger growth, with their sufferance breedeth great losse and destruction.

Weeding.

CHAP. IX.

Of the Plowing, Tilling, Ordering and Inriching of all barren Sands which are over-runne with mores or morish stinking long Grasses.



Vnto these fore-going barren Sands, of which I haue already written, I will lastly ioynce this last barren Sand, being of all earths, whether Clay or Sand the most barrenest, and that is that filthy, blacke, morish Sand which beareth nothing but a stinking, putrified Grasse or Mosse, or Mosse and Grasse mixed together, to which not any Beast or Cattell, how course or hardly bred focuer, will at any time lay their mouthes: and this kinde of ground also is very much subiect to marishes and quagmires, of which that which is couered with Mosse, or Grasse, is the worst, and that which is tufted aboue with rushes, the best and soonest reduced vnto goodnesse; in brieft, all these kinds of grounds generally are extremely moyst and cold, the superabundance whereof is the occasion of the infinite sterility and barrennesse of the same:

And therefore hee that is master of such vnprofitable Earth, and would haue it brought to some profit or goodnesse, shall first consider the situation of the ground, as whether it lye high or low, for some of these marish grownds lie low in the Vallies, some on the sides of Hilles, and some on the tops of Mountaines; then whether the much moystnesse thereof bee fedde by Riuer, Lake or Spring, whose veines not hauing currant passage through or vpon the earth, spreads dookingly ouer all the face thereof, and so rotting the mould with too much wette, makes it not onely vnpassable,

stable, but also viterly vnprofitable for any good burthen.

Now if you finde that this marish Earth lie in the **Ground for** bottome of low valles, as it were girdled about with hilles **Fish-ponds.** or higher grounds, so that besides the feeding of certaine Springs, Lakes, or Riuer, euery shower of raine or falling of water from higher grounds bringeth to these an extraordinary moysture to maintaine the rottenesse, in this case this ground is past-cure for grasse or Corne, and would onely bee conuerted and made into a fish-pond for the breeding and feeding of Fish, being a thing no lesse profitable to the Husband-man for keeping his house, and furnishing the market then the best corne-land hee hath; and therefore when hee maketh any such pond hee shall first rayse vp the head thereof in the narrowest part of the ground, and this head by driuing in of stakes and piles of rough and hard wood as Elme, Oake, and such like, and by ramming in of the Earth hard betweene them, and sodding the same so fast that the mould can by no meanes bee worne downe or vndermined with the water, he shall bring it to as firme Earth as is possible, and in the midst of this head hee shall place a sluice of Flood-gate made of sound and cleane Oake Timber and planks, through which at any time to draine the Pond when occasion shall serue, and this done, you shall digge the Ponde of such depth as the Earth conueniently will beare, and casting the Earth vpon either side you shall make the bankes as large and strong as the ground requireth, then if any Spring which did before feede the Earth be left out of the compasse of the Ponde (because it lieth too high to bee brought in) then shall you by drawing gutters or draines from the Spring downe to the Pond, bring all the water

of the Springs into the Pond, and so continually feede it with fresh and sweet water. Then storing it with Fish of best esteeme, as *Carpe*, *Tench*, *Bream*, *Pearch*, and such like, and keeping it from weeds, filth and Vermine, there is no doubt of the daily profit.

But if this marish and low Ground though it lie low and haue many Springs falling vpon it yet it lyeth not so extreame lowe but that there is some Riuer or dry Ditches bordering vpon it, which lie in a little lower dissent, so that except in case of inundation the Riuer and Ditches are free from the moysture of this Ground, but where there is any ouer-flowing of waters there this marish Ground must needes bee drowned, in this case this ground can hardly bee made for Corne, because euery ouerflow putteth the Graine in danger, yet may it bee well conuerted to excellent pasture or medowe, by finding out the heads of the Springs, and by opening and cleansing them, and then drawing from those cleansed heads, narrow draines or forrowes through which the waters may passe to the neighbour ditches, and so be conueied downe to the lower Riuers; leaving all the rest of the ground dry, and suffering no moistures to passe, but what goeth through these small deepe channels, then as soone as Sommer commeth, and the ground begins to harden, if you see any of the water stand in any part of the ground, you shall forthwith mend the draine, and helpe the water to passe away, which done (as the ground hardeneth) you shall with hacks and spades lay the swarth smooth and plaine, and as early in the yeare as you can conueniently, you shall sow vpon the ground good store of hay feedes, and if also you doe measure it with the rotten staddels or bottomes of haystackes, it will be much the better, and this staddell you shall not spread very thicke, but

but rather of a reasonable thinnesse, that it may the sooner rot and consume vpon the same.

But if this marish and filthy ground doe not lie so low as these low valleyes, but rather against the tops of hills, you shall then first open the heads of all the Springs you can find, and by seuerall draines or fluces, draw all the water into one draine, and so carry it away into some neighbouring ditch & valley; and these draines you shall make of a good depth, as at least two foote, or two foote and a halfe, or more, if need require, and then crosse-wise, euery way ouer-thwart the ground, you shall draw more shallow furrowes, all which shall fall into the former deepe draines, and so make the ground as constant and firme as may bee: then hauing an intent to imploy it for Corne, you shall bring your plow into the ground, being a very strong one, and not much differing in Timberworke or Irons from that which turneth vp the Clay grounds, and laying before the plow long waddes or roulles of the straw of Lupynes, Pease, or else Fitches, (but Lupynes is the best) you shall turne the furrowes of earth with the plow vpon the waddes, and so couer or bury them in the mould, and thus doe vnto euery forrow, or at least vnto most of the forrowes you turne vp, and so let it lie a little time to rotte, as by the space of a fortnight or three weekes, in which space, if the ground receiue not raine and moysture enough to rotte the straw thus formerly buried, you shall then by stopping the draynes, and making the Springs overflow, gently wash the ground all ouer and no more, and then presently draine it againe, which done, as soone as the earth is dry, you shall hacke it and breake it into small peeces, then you shall also Sande it, Lyme it and manure it.

Draining of
wet grounds

And

And lastly, you shall marle it, but if no salt sand bee to be had, then in stead of it, you shall chalke it, yet of all the rest you shall take the least part of chalke.

This done, about the latter end of *Iuly* you shall plow vp the ground againe with somewhat a better and deeper styth then you did before, that if any of the straw bee vnrotted or vconsumed, it may againe bee raised vp with the new moist earth, and so made to waste more speedily, and if at this second carrying you doe see any great hard clots to rise, then with your haks you shall breake those hard clots in peeces, laying the land cleane without clots, weedes, or any other annoyance, and so let it rest till October, at which time you shall plow it ouer againe, hacke it, harrow it, and then sow it with the best seed-wheate; for this soile thus drest and measured, albeit it be of all other the most barren, yet by reason of this moysture which at pleasure may be put to it, or taken from it, and by the mixture of these comfortable soyles and compasses, it is made as good and fruitfull as any earth whatsoever, and will beare Wheat abundantly the space of three yeares together; then good Barley the fourth yeare with a little helpe of a sheepefolde, or sheepes meanure; then Rye the fift yeare; Oates the sixt, the seuenth and eight yeares; small Pease, the ninth yeare, good medow or pasture three yeares following, and then to be new drest againe, as before said.

Harrowing.

Now as soone as your seed-wheat is sowne, you shall then harrow the ground againe, and be sure to couer the wheate both deepe and close, as for the clots which shall arise from this soyle, it shall not matter whether you breake them, or no, for by reason of their moysture, they will be plyant and easie for the wheate to passe thorow, so that you shall not care how rough your land lie, so it lie cleane,

cleane, and the Corne well couered, but for all other seeds, you shall breake the clots to dust, and lay the land as smooth as may be.

Now for the weeding of this soyle, you will not bee much troubled therewith, because this ground naturally of it owne accord, putteth forth no weeds, more then these which are ingendred by the new-made fruitfulnessse thereof, and those weeds for the most part are a kind of small sedge, or hollow reede; any of which if you see appeare, or with them any other kind of weed, you shall at the first appearance, either pull them vp by the rootes with your wooden nyppers, or else cut them close by the ground with your weed-hookes.

Weeding.

CHAP. X.

A generall way for the enriching of any poore arable ground, either Clay or Sand, with lesse charge then formerly.



IF the former demonstrations and instructions which I haue shewed thee, appeare either too difficult, or too costly (for now I speake to the plaine, simple, poore husbandman) and yet thou art master of none but barren earth, then thou shalt by thine owne industrie, or the industrie of thy children, seruants, and such like, or by contracting with Taylers, Botchers, or any poore people that will deserue a pennie, gather vp, get, or buy all the ragges, shreds, and base pieces of woollen cloth whatsoeuer, which are only cast out, and fit for nothing but the dunghill, and of these if thou canst compasse but a sacke full, or a sacke full and an halfe, it is sufficient for the dressing
I of

*Additions,
the whole
Chapter.*

*Raggs of
woollen
cloth.*

of an acre of arable ground. These shreds and ragges (torne small) thou shalt thinly spread over the land before fallowing time, then comming to fallow, plow them all into the ground, and be sure to couer them, then giue your land the rest of its ardors, as stirring, foyling, ridging, &c. in their due seasons, and after an husbandly manner: then when you come to sow it, you shall take

Steeping of the flymie thick water which commeth from dung-hils; Seed-corne. or for want thereof, water in which Cow-dung hath

beene steeped, and therein you shall steepe your seed-corne, that is to say, if it be Barley, you shall steepe it for the space of thirtie and sixe houres, or thereabouts; if it be Wheate, but eighreene houres; and if it be Pease, but twelue houres; for Rye or Oates, not at all: and the Seede thus steeped, you shall sow it according to good husbandrie, and there is no doubt of wonderfull increase.

Or any Pulse.

There be others which take the Seed-corne, and steeping it in good store of Cow-dung and water, stirre all together for an houre in the morning, and an houre at night, and then being ferled, drayne the water from the Seede and the dung, and the next morning sow the corne and the dung both together on the land, being sure not to scant the land of seed, and no doubt the increase will be wonderfull. Now if this cannot be conueniently done, or that you want dung, if then you take ordinarie water, and therein steepe your Seed, it is good also, and especially for Barley, as is approued by dayly experience. But now me thinkes I heare the poore man say, that here is but one acre drest, and that is a small proportion: to this I answer, If thou beest able but to dresse one acre with these woollen ragges, thou shalt then search amongst the Horners, Tanners, Lanthorne makers, and such like, and get all the wast shauings of horne which thou canst possibly

Shauings of horne.

sibly compasse, and as before of the ragges, so of these a sacke and an halfe, or two sackes will dresse an acre : these shauings (which are indeed good for no other vse) you shall scatter vpon the land as you did the ragges, then plow them in after the same maner, so order the ground, so sow, and in the same manner steepe the Seed, and questionlesse the increase will bee wonderfull great : thele meanures wil last fīue yeares without any renewing. Now if of these you cannot get sufficient to trimme all your ground, you shall then deale with Butchers, Sowse women, Slaughter men, Scullions, and the like ; and from these you shall get all the hoofes you can, either of Oxe, Cow, Bull, Calfe, Sheepe, Lambes, Deere, Goats, or any thing that cheweth the cud, and which indeed, if not for this vse, are otherwise vterly cast away to the dunghill, and despised ; and these hoofes you shall scatter thicke vpon your land at fallowing time, then plow them in as aforesaid, and doe in all points as with the other meanures alreadie recited, and so steepe your Seed, and there cannot bee a greater intricher of arable ground whatsoever.

Hoofes of cattell.

Now if all these will not yet compasse you land, you shall then see what sope ashes you can get or buy, for of all meanures there is none more excellent, for besides it giueth an exceeding strength and fatnesse to the land, it also killeth all manner of weedes, great and small, as Broome, Gorfe, Whynnes, and the like, and it killeth all manner of wormes, and venomous creeping things, it is excellent for Woad, and the ground renewed yearly therewith, may bee sown continually : these sope ashes must bee laid on the land after the fallowing, and then stirrd in, two load thereof will serue to dresse an acre : when it is fit for Seed, the Seed must be steeped as aforesaid,

Of Weade.

The enrich-
ing of ordi-
narie mea-
nure.

The haire
of beasts
hides.
Of Braken.

To rot dung
quickly.

and then sown, and the increase will quit the charge manifold. These Sope ashes are also excellent good for Hempe and Flaxe, being thinly sowne vpon the land, after it is plowed, & immediatly before the Seed be sowne: But if you haue more land to dresse, then you must make vse of your owne ordinarie measure, as is Oxe dung, Horse dung, and the like, which that you may make richer and stronger then otherwise of it owne nature it would be, you shall cause continually to be throwne vpon it all your powdred beefe broth, and all other salt brothes or brines which shall grow or breed in your house, also all maner of Soape suddes, or other suddes, and washings which shall proceede from the laundrie, and this will so strengthen and enrich your measure that every load shall be worth five of that which wanteth this helpe. There be diuers other measures which doe wonderfully enrich and fatten all manner of barren grounds, as namely the haire of beasts hydes, (which for the most part Tanners and Glouers cast away) this thinnely spread on the land, and plowed in, brings every yeare a fruitfull crop. Againe, if Braken or Ferne bee laied a foot thicke vpon the earth, and then a layer of earth vpon it, then another layer of Braken, and another layer of earth, and so layer vpon layer till the heape be as bigge as you intend it, and so left to rot all the Winter following, there cannot be a better measure for any arable ground; for you shall vnderstand that the earth will so rot the Braken, and the Braken so soake into the earth, that they will become both one rich substance. And herein you shall note, that whensoever you would haue any substance (of what condition soeuer) quickly to rot and turne to measure, that the onely way is to mixe it with earth, and that will in short space bring it to rottenesse. Now this Braken
and

and earth thus rotted, you shall lay vpon your land as you do your ordinarie dung of cattell, and then sow your Seed being steeped, as aforesaid.

Next, your Malt-dust which is the sprout, come, smytham, and other excrements of the malt, is an excellent meASURE for arable land, allowing three quarters thereof for an acre, and strowing it vpon the land after it is plowed and ready to be sowne.

Of malt-dust.

There is another meASURE, which albe it is not plentifull euery where, yet in some places it is, and there not inferior to any meASURE before spoken of, and that is your rotten pilchards after the oyle is taken from them, and the carcasses cast to the dunghill, this laid on the land, and plowed in, bringeth corne in great abundance, and no lesse doth the carcasses and garbage of all kind of fish whatsoeuer, especially of sea-fish.

Of rotten Pilchards and garbage

Lastly, the blood, entrals, and offall of any beastes is an excellent meASURE for any kind of graine, plant, or tree, but especially for the vine, for to it there is no nourishment of greater force or efficacie: also, if this blood be tempered with lime it is exceeding comfortable for graine, and destroyeth wormes, and other creeping things which hurt corne, only it must not be applyed presently, but suffered for a little time to rot, least the too much heate thereof might scorch and do hurt to the root of the corne: this meASURE is to be laid on the earth when you sow it, and so the Seed and it harrowed or plowed intogether, which done after the order of good workmanship, there is no doubt of the increase.

Of blood and offalls.

CHAP. XI.

*How to enrich for Corne any barren, rough, wooddie ground
being newly stubbed vp.*

*Additions,
the whole
Chapter.*



If you have any barren wooddie ground which is newly stubbed vp, and that you would conuert it to arable, you shall then take a great quantitie of the vnderwood, or worst brush wood which was cut from the same, and in the most conuenientest place in the field, as in the midst, or neere thereabout, you shall frame it into a broad hollow pile, and then couer it all ouer with great sodds of earth, which done, set fire on it, and leaue no part thereof (either wood or earth) vnburnt, then take those

Wood ashes

ashes and spread them all ouer the field, so farre forth as you meane to plow vp, then with a good strong plow fallow the ground as deepe as you can, and so let it rest till it be almost May, then take either Ferne, Stubble, Straw, Heath, Furrtes, Sedge, Beane stalkes, or any other wast growth, take I say either any one, or more of these, or all together, as you stand posselt of them, and burne them to ashes, and therewith couer your land the second time, and then Sommer stirre it, within a Moneth after soyle it, then at the beginning of October, or a little before, plow it againe, and sow it with Rye the first crop, and you shall see the increase will be very plentifull, the next yeare you may sow it with Wheate, the third yeare with Barley, the fourth yeare with Pease, Lupins, Fetches, or any other Pulse, and then beginne with Wheate againe; for it is credibly said, that this manner of dressing these barren, wooddie grounds, shall maintaine

*Ashes of
Ferne,
Straw, &c.*

and

and keepe the earth in good heart and strength (in the worst places) for the space of foure yeares; in that which is any thing reasonable for the space of fixe yeares; and where there is any small touch of fertilitie for the space of sixteene yeares; of which there are daily experiences in France, about the forest of Ardena, and some with vs here in England in many wooddie places.

CHAP. XII.

The manner of reducing againe, and bringing unto their first perfection all sorts of grounds which have bene overflowed, or spoyled by salt-water, or the Sea-breach, either arable, or pasture, as also the enriching or bettering of the same.



Here is nothing more hard or difficult in all the art of husbandrie, then this point of which I am now to intreat, as namely, the reducing and bringing vnto their first perfection all sorts of grounds which have beene over-flowed or else spoiled by the Sea-breach, and bringing in of too great abundance of salt-water; which to some men (of little experience, and free from those dangerous troubles) may appeare a matter very sleight; and the wound most easie and curable, and the rather, because in all my former relations and demonstrations touching the bettering of euery severall sort of ground, I do applie as one of my chiefest ingrediens or simples, by which to cure Barrennesse, Salt land, Salt weeds, Salt water, Salt brine, Ashes, Lime, Chalke, and many other things of a salt nature, (as indeed all measures and manures whatsoever must either haue a salt qualitie in them, or they cannot produce fruit-fulnesse).

The vice which comes from salt.

Additions the whole Chapter.

The difficultie of this labour.

The vertues of salt.

The vices
which come
from Salt.

fulnesse) so that to argue simply from naturall reason, If salt bee the occasion of fruitfulnessse and increase, then there cannot be much hurt done by these overflowses of the salt water, but that it should rather adde a fattening and inriching to the ground then any way to impouerish it, and make it incapable of growth or burthen. But experience (which is the best Mistresse) shewes vs the contrarie, and there is nothing more noysome and pestilent to the earth then the superabundance and too great excesse of saltnesse; for according to our old Prouerbe of *amne nimium*, that too much of every thing is vitious: and as we see in the state of mans bodie, that your strongest poysons, as *Antimonie* or *Stibium*, *Coloquintida*, *Rubarb*, and the like, taken in a moderate nature, are most healthfull, and expell all those malignant qualities which offend the bodie, and occasion sicknesse; but taken in the least excesse that can bee deuised, they then (out of their vitious and naughtie qualities) do suddenly and violently destroy all health, and bring vpon the bodie ineuicable death, and mortalitie; so is it with this matter of salt, and the body of the earth, for as by the moderate distributing thereof, it correcteth all barren qualities, disperseth cold and naughtie vapours, and yeeldeth a kind of fatnesse and fruitfulnessse, whereby the Seede is made more apt to sprout, and the ground more strong and able to cherish the same till it come to perfection, through the sharpe, warme, and dispersing qualitie thereof; so being bestowed in too great abundance and excesse, whereby the earth is surfeited, and as it were overcome and drowned vp with too much of this naturall goodnesse and helpfull qualitie, then all his proper vertues turne to egregious vices, as his wholesome sharpnesse to a fretting, gnawing, and destroying greedinesse; his comfortable

The abuse
of Salt in
excesse.

warme-

warmenesse to a consuming and wasting sterinesse and his gentlenesse in dispersing to an infectious and venomous pollution, by the ioynt qualities of all which together, the ground is made neither fitte to receiue any thing from the hand of the Husband man, nor yet to produce or bring forth any thing of it selfe, because euery good qualitie is abused or expelled, and nothing but vnnaturalnesse and sterility left; which like a Serpent lodgeth in the ground and will suffer no good thing to haue society with it; and these are the effects and mischiefes which are occasioned by these Sea-breaches or inundations of the salt water.

It is certaine that although in the salt marshes, where the sea commeth in at certaine times and onely washeth or sprincklerh the ground all ouer and so departeth, there is neither want of grasse, nor yet complaint of any euill quality in the grasse, yet it is most certaine that no ouer-flow of salt water how little or moderate soeuer, can bee truly said to bee wholesome for any kind of grasse ground whatsoeuer; for grasse is compounded of an infinite world of plants and simples, and most of them of seuerall natures and qualities, so that if it giue nourishment to one, yet it may destroy tenne; neither doe I finde it by any of the Ancients simply and properly applied vnto the grasse grounds, but first vnto the arable, in which hauing spent its primary or first strength vpon the seede (which is a great and greedy deuourer or eater vp of the strength and fatnesse of the earth) it then prepares and makes the ground more able and fit to bring forth grasse, and that of the best and finest kind, for although the Masters of the Salt marshes finde a singular and rare profit in those grounds for the feeding, breeding, fattening, and sustaining of their great flockes of sheepe, which vpon these salt

K

grounds

Of salt moderately vsed.

No ouer-flow of salt water good for grasse.

The grounds of the salt Marshes.

A true cause
of barren-
nesse.

Where this
annoyance
is incurable.

Where it is
curable.

grounds, they say, will neuer rot or perish by that vniuersall disease, yet must they not impute that to the great quantitie, goodnesse, or any growth in the grasse, but to the salt which they licke vp in the grasse, and to the salt qualitie of the grasse, which is not onely an antydote or preseruatiue against that noysome and pestilent mortality, but also a delightfull and pleasant food wherein those cattell take more contentment then in any other thing whatsoeuer; so that I must necessarily rest vpon this conclusion, that as but moderate washing and ouerflowing of salt waters are no certaine or particular great helps vnto grasse grounds, especially if they be applyed therunto, and to that purpose simply at the first, without any other preparatiue or working by a former meanes, as by tillage, digging, deluing, or the like; so the exceeding great inundations or Sea-breaches which lye long soaking and sinking into the earth must needs be a certaine, infallible, and almost incurable cause of barrennesse, eating, spoyling, and consuming the very rootes of all manner of plants, trees, and growthes, by which the ground is made vterly incapable of generation or bringing forth: and therefore where these great inundations or ouerflowings cannot be either prevented or auoyded, but as the seasons of the yeare they doe and must hold their courses, there I would not wish any man to bestow eyther his labour or his cost, for it is losse of time and losse of substance: but where it is to bee prevented or auoyded by industrie, or that those ouerflowings or Sea-breaches come and happen by casualtie or change, as eyther by the vnnaturalnesse and superabundance of tydes being driuen in by the violence and impetuousnesse of outrageous winds, or by any neglect or breach in the Sea wall, or other mishaps of the like nature, which happeneth
some.

sometimes scarce one in an age, at the most not above once or twice in many yeares; in these cases there is most certaine remedie, and the grounds so spoyled and wasted, may by art and industrie be againe reduced and brought to the former perfection and goodnesse; nay many times amended and freed from many faults and sterile qualities, to which it was either naturally addicted, or else by chance and accident grew thereunto, by continuall wearying and imployment, without rest, or refreshing by the artificiall meanes of wholesome meanures, or other strengthnings which ought to bee applied before these faults grew into extremities.

Now touching the cure of these grounds which are thus worne out, decayed, and made barren by these inundations of salt water, the owner thereof is first to draw into his consideration, that as the malignity and euill qualitie of the earth is growne by too much fretting, gnawing, and wasting of the salt, so it must be allayed and qualified by a quite contrary condition, which is freshnesse: the contrarie then to salt water, must of necessity be fresh water, so that you are to cast about in your iudgement, and by the view, situation, & leuell of the ground (which for the most part can haue but little difficulty in it because these grounds vpon which the Sea thus breaketh, must euer be the lowest of all other, so that a true descent comming vnto it, and a true assent comming from it, there is no hardnesse to conuey any water course therunto) looke how to bring a freshnesse which may conquer and overcome this saltnesse, and that must therefore be fresh water, which by channels, ditches, furrowes, sluices, and the like, you may bring from any fresh riuer, spring, pond, or other fresh water course (though remoued some distance of miles from the place to which you would conuey it)

The manner
of the cure.

One contrarie
helps another.

The watering
with
fresh water.

How to
draine away
the fresh
water.

How oft to
drownd the
earth.

Helps if
fresh water
be wanting.

Whether
brackish wa-
ter be whol-
some.

to the very place to which you desire to haue it, and with this fresh water you shall wash and gently drowne ouer so much of your spoyled ground as you shall be able reasonably to deale withall in other costs and labours for that yeare; and if you haue plentiful store of fresh water, then hauing (as I said) drowned it ouer gently, about foure inches, or halfe a foot deepe, you shall so let it lye two or three dayes, then drayne away that water by the help of backe ditches, or by sluces made for that purpose, which if the situation of the ground deny you, and that there is no such conuenient conueyance, then you shal in the lowest part of the ground (either ioyning vpon some other spoyled ground, or vpon the Sea wall or banke) place a Coy which may either cast the water into the other ground, or else ouer the wall and banke into the Sea; and hauing thus drayned away the first water, you shall then open your sluces of fresh water againe, and drowne your ground ouer the second time, and do in all things as you did before, and thus according to the plentifulnes of your fresh water, you shal drowne you ground, or at least wash it ouer with fresh water twice a weeke before the beginning of the Spring, and if the salt water haue laine long, or be but new departed, then you shall continue the vse of your fresh water for some part of the Spring also.

Now some may obiekt vnto me here (and it is a matter not altogether vnlikely) that in some of these places where these inundations and breaches are, it is impossible either to find fresh water, or to bring fresh water vnto them, because all the springs for many miles about being made naturally brackish, and the riuers by the infection of the salt tides, hauing lost the greatest part of their sweet freshnes; the question now resteth, whether these brackish waters are wholesome for this purpose, I or no? to this

I must

I must need answer, that they cannot in any wise be good for these spoyled grounds, because the earth naturally is of an attractive & drawing conditior, sucking and gathering vnto it selfe any thing that is of a sharp, sweet, or sower tast, and especially saltnesse, so that being couered with those brackish waters, it will draw from them only their salt (of which it hath too much already) & no part of the freshnes which should qualifie & amend it: therefore if either your ground bee thus situated, or your necessities thus vnsupplied, it is better that you rather forbear this labour of washing or drowning your earth, (though it be the first, the speediest, & surest cure of all other) then by watering it with infirme and vnwholsome waters, rather increase the mischief, then any way delay it.

After you haue watered your ground (if it be a worke possible to be attained vnto) or otherwise neglected it (being a thing not possible to be found) you shall then about the latter end of March plow vp all the ground with a good deep stich, turning vp a large furrow, & laying it into lands, raise them vp as much as you can, & make them round, then looke of what nature or temper the earth is, as whether it be fine sand, rough grauell, stiffe clay, or a mixt earth, or any of these contraries together: If it be a fine sand, either white, red, or browne, it matters not whether, then you shall take any clay earth which is free from these salt washings, being of a meane or small stiffenes, & likewise of as meane and little richnes, which being digged out of some banke, pit, or other place where least losse is to be had, you shall carry it in tumbrels or carriages to the new plowed ground, & there first lay it in heaps as you do meanure, then after spread it all ouer the land, and being dry, with clotting beetles breake it as small as you can possibly, for this hungry clay being of no rich or

The first
time of
plowing,
and the ob-
seruations
therein.

How to
mixe earths.

fat cōdition, will so suck & draw the salt into it, that it will take away much of the euill quality, & mixing his tough quality with the loose condition of the sand, they wil both together become apt for fruitfulness and generation.

The mix-
ture for gra-
uell.

If the soyled ground be a rough hard grauelly earth, then you shall mixe or spread vpon it the best and richest fresh clay you can get, or if there be any such fruitfulness neere about you, then with good blew marle, for that is the coolest and the freshest, and will the soonest draw out the salt from the grauell, and giue it a new nourishment, whereby any seed shall be fed and comforted which is cast into it.

The mix-
ture of clay.

If the spoyled earth bee of it owne nature a stiffe and tough clay, which is but seldome found so neere the sea-shoare, then after the plowing, you shall mixe it, and couer it ouer with the freshest and finest sand that you can possibly get, for that will not onely seperate the salt from the clay, and take away the naturall roughnes & stifnes of the same, which hindreth and suffocateth the tender sprouts, so as they cannot easily get out of the earth, but also by lending a gentle warmth, will assuage the cold quality of the clay, & make it bring forth most abundantly

The mix-
ture of mixt
earth.

Lastly, if the spoiled earth be of a mixed quality, then you shall looke whether it be binding or loosening, if it be binding, then you shall mixe or couer it with fine fresh sand, if loosening, then with a reasonable rich and tough clay, for so you shall bring it to an open and comfortable temper, making it able both to receiue, cherish, and bring forth the seed, which before either too much wet, or too much drinesse did stifle and bind vp within the clots and mould, so as it had no strength to beare it selfe through the same.

The second
flowing.

When you haue couered your lands with this mixture,
you

you shall then plow it ouer againe before *Miasomer*, turning the new laid earth vnder the old earth, and as soone as that labour is finished, you shall then lade forth your measure or compasse vnto it, in which you are to haue a great care what measure you elect for this purpose, for it is not the richest and fastest measure (as your Pidgeons dung, or Pullens dung, Lime, Chalke, or ashes, your Horse dung, your shouclings vpon high-ways, your Beasts houes, your horne shauings, your Hemp-weede, or any other weecde which groweth neere the seydge of the Sea, neither your Oxe or Cow-dung, though of all before named, that is the best which doth the most good vpon these spoyled grounds, because they haue all in them a strong qualitie of saltnes or sharpnesse, which will rather adde then diminish the euill quality of the earth, but instead of these you shall take the mudde and dried bottoms of Lakes, Ponds, and Ditches of fresh water, and the moysture or wetter such mudde or bottomes are, the better it is, or Straw which is rotted by some fresh water-course, raine, or the like, by no meanes that which is rotted by the vrine or stale of Horse or cattell, for that is the saltest of all other; or you may take any weedes which you see grow in fresh Riuers, Ditches, Ponds, or Lakes, especially those which grow at the bottomes of Willow, Sallow, or Osier trees, or you may take the old Ragges of wollen cloth, or any other measure which you know to bee the wollest or freshest, and with any of these or all of these together, you shall very plentifully couer your ground all ouer, and immediatly vpon the couering or laying on, see you presently plow it, land after land; for to giue it any long respite after it is spread, the Sunne out of his attractive and strong nature will exhale and draw out all the vertue from your measure,

Ellection of
measures.

The best
measure.

The ordering of the
measure.

The third
plowing.

measure, and so spoyle much of your labour.

The last
plowing,
and the
Sowing.

The second
yeare sow-
ing and the
third.

Laying the
earth for
grasse.

Of grazing.

When you haue thus measured it, and plowed it, you may then let it rest till *Michaelmas*, at which time you may plow it the last time, and then sowe it with the strongest and hardest Wheate you haue, of which the white Pollard is the best, and there is no question but if it bee safe from a second Inundation, your Croppe will both be plentiful and rich, and also acquit and pay largely for all your former charges. The second yeare you neede but onely plow it as aforesaid; and then sowe it with good Hemp-seede, and be assured you will haue a braue croppe arise thereof; then the third yeare you shall plow it as flatte as you can, still throwing it downe and not raising it vp at all, and then sowe it with the best Oates you can get, according to the nature and strength of your Countrie, and bee sure to Harrow it well, and to breake euery clotte, and make the mould as fine as is possible, and the next yeare after your Oates, lay it for grasse, and I dare bee bold it will beare reasonable meadow; yet would I not haue you this yeare to preferue it for that purpose; but rather to graze it with sheepe or Cattell, especially sheepe, of which I would haue you lay on good store; for it matters not how neare or close to the ground they eate it; for the next yeare it will become to the fulnesse of perfection; and bee as profitable or more profitable ground then euer it was, and then you may apply or accommodate it for what vse you please, either arable meadow, or for continuall grazing. And thus much touching the manner of reducing againe and bringing vnto their first perfection, all sorts of grounds which haue bin ouer-flowed or spoyled by Salt water, or the Sea-breaches; whether it be arable or pasture; as also the enriching or bettering of the same.

CHAP. XIII.

Another way to inrich barren pastures, or meadowes, without the helpe of water.



IF your Barren pastures or Meadowes be so seated that there is no possible meanes of washing or drowning them with water, you are then onely to restore and strengthen them by the efficacie of manure or soyle, without any other helpe, and this may diuers wayes be done, as by those manner of manurings which I haue formerly treated of. But to goe a better and briefer way to worke, and more for the ease and capacitie of the plaine Husband-man, when soeuer you shall bee posselt of these barren pastures, if the barrenesse proceede from Sand, or Grauell, then some Husbands vse to manure the pasture ouer with the best Clay they can get, first laying it in heapes, then spreading it, and lastly with clotting beetles breaking it into as fine dust as they can get it, and this labour they commonly performe as soone as they can after Haruest when the latter spring is eaten, and the earth is most bare, but if the barrenesse proceed from an hungry, cold and dry Clay, then they manure it with the best Moorish blacke earth which they can get, or with any moyst manure whatsoever, especially and aboue the rest, with the soyle that is digged out of old Ditches, Ponds, or dried vp standing lakes, and this earth must bee laid plentifully vpon the ground in manure as afore said, that is to say, first in great heapes, then after broken and dispersed ouer the whole ground, and lastly broken into small dust, and mixed with the swarth of the ground, and this labour ss the o-

Clay mea-
nure.

Morish
earth.

**The best
way to in-
rich pasture
or meadow.**

**The soyle of
the streetes,
or high-
wayes.**

**Earth vnder
dung-hils.**

**To enrich
Gardens, or
Orchards.**

ther is generally performed after the Haruest as a time of most conuenience, and giuing the eath a fit respit to suck in the strength and comfort of the new earth, and also hauing all the Winter after with his frosts, snowes, and showers, to mellow, ripen and mixe together the one earth with the other, and doubtlesse this is a most exceeding good Husbandry and not to bee refeld or carpt against by any knowing or sound iudgement, onely it is not the most absolute, or the best of all wayes whatsoever, but that others may be found somewhat more neare, and somewhat more commodious. Therefore whensoever you shall bee owner of any of these barren pastures, or Meadowes, of what nature or condition soeuer the earth be, whether proceeding from Grauell, Sand, Clay, or pesterd with any other malignant qualitie whatsoever, to reduce it to fertilitie and goodnesse in the shortest time and to the most profit, about the moneth of March, when all pasture grounds are at the barest, and doe as it were remaine at a stand betweene decreasing, and increasing, you shall begin then to leade forth your manure for the refreshing of these Earthes, and the manure which you shall cary vnto these grounds, shall be the soyle of streets within Cities, or Townes, or the parings and gatherings vp of the high-wayes much beaten with trauell, also the earth for two or three foote deepe which lieth vnder your dung-hill when the dung is remooued, and caried away, for this is a most precious and rich mould, and is not alone excellent for this vse, but also for the vse of Gardens, for strengthening and comforting of all sorts of tender Plants, and for the vse of Orchards, for the comforting both of olde and yong trees, when at any time their Rootes are bared, or otherwise when there groweth any mislike or decreasing.

You

You shall also take the fine earth or mould which is found in the hollow of old Willow trees, rising from the roote vp, almost to the midle of the Tree, at least so farre as the Tree is hollow, for then this there is no earth or mould finer or richer. Of all of these measures, or of any one of them, or of as many as you can conueniently get, you shall leade forth so much as may very plentifully meature and couer your ground all ouer; you shall first lay it on the earth in reasonable bigge heapes that the Sunne may not exhale the goodnesse out of it; and then at your best leasure and so soone as you can conueniently you shall spread it vniuersally ouer all your field, dispersing it as equally as you can, vnlesse your field bee more barren in one place then in another, which if it bee, then you shall lay the greatest plenty where it is most barren, and the lesse where you find the greatest fertilitie, yet by all meanes see you scant not any place, but giue euery one its due; for to doe otherwise would shew much ill Husbandrie.

The mold
in Willow
trees.

Now it is the vse of some Husband-men, that what mould or earth they lade out from fixe of the clock in the morning, till three of the clock in the after noone, that they make their Hindes spread in the Euening before they goe to Supper, and questionlesse it is a very good course, and worthy to bee imitated of euery good Husband.

The spread-
ing of
mold.

After you haue laid forth your molde and spread it all ouer your pasture or meadow, then you shall make some boyes, gerles, or other poore people, to picke and gather vp all the stones, stickes, or other vnncessary matter which might happen to bee led forth with the mold, and to pick and lay the pasture so cleane as is possible,

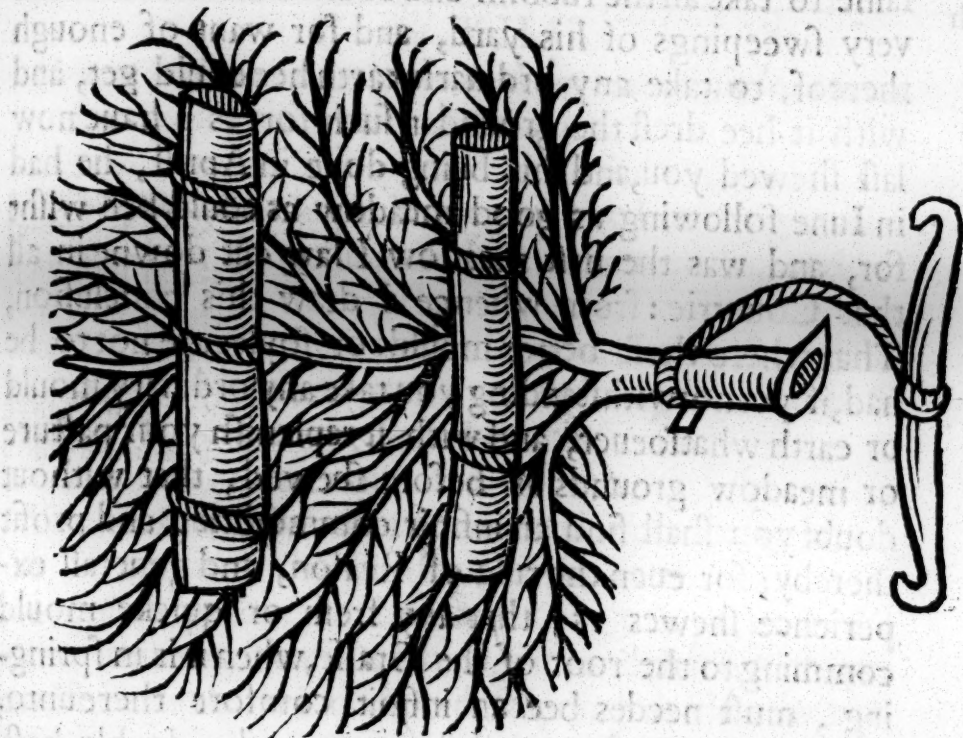
Of stone ga-
thering.

which done, it is to bee intended that yet not withstanding this ground will lye exceeding rough, both in respect of the clottes of earth, which will not easily bee broken, as also in respect of naturall toughnesse of these rich molds which at this time being digged vp in the wet, will not easily bee seperated or dissolved, and therefore when you haue finished the labours before said; you shall let the clottes rest till the Sunne and weather haue dried them, then after a good ground shower (observing to take the first that falleth) you shall harrow all your ground ouer after this manner.

A new way
of harrow-
ing.

You shall cut downe a pretie bigge white thorne Tree, which wee call the Hawthorne Tree, and make sure that it bee wonderfull thicke, bushie, and rough growne, which done you shall plash it as flatte as you can, and spread it as broad as you can, and those branches or boughes which of necessitie you must cut in sunder, you shall againe plash and thrust into the bodie of the Tree, binding them with cords or Withes so fast thereto, that they may by no meanes scatter or shake out, and if any place appeare hollow or thin, and cannot come to lie hard, firme and rough vpon the ground, then you shall take other rough bushes and thrust into the hollow places, and bind them from stirring, also till you haue made you plashe full and equall in all places, and that all the roughnesse may as in a flat leuell equally touch the ground, when you haue thus proportioned your Harrow, you shall then take great Logges of wood, or peeces of Timber, and with Ropes binde them on the vpper side of this rough Horrowe that the poysc or weight of them may keepe the rough side

side hard and firme to the earth, and then the Harrow will carry this proportion or figure.



To the big end of this Harrow, you shall fixe a strong rope, with a Swingle-tree with Treats, Coller, and Hames, and one Horse is fully sufficient to draw it round about the pasture or meadow, so with this Harrow you shall Harrow the ground all over, and it will not onely breake all the hard clots to a very fine dust, but also disperse them and drive them into the ground, and giue such a comfort to the tender roots of the yong grasse then newly springing, that it will double

Of rubbish
and sweep-
ings.

and treble the increase. And for mine owne part, this experience I my selfe haue seene vpon an extreame barren pasture ground in Middlesex, where none of these goods moulds or soyles could bee got, but the husband was faine to take all the rubbish and course earth euen to the very sweepings of his yard, and for want of enough thereof, to take any ordinarie earth hee could get, and with it hee drest the ground in such sort as I haue now last shewed you, and this being done in Aprill, he had in Iune following as good meadow as could bee wisht for, and was the first meadow I saw cut downe in all that Countrey: from whence I draw this conclusion, That where these better moulds or soyles are not to be had, if yet notwithstanding you take any ordinary mould or earth whatsoeuer, and with it replenish your pasture or meadow grounds as before shewed, that without doubt you shall find an infinit commoditie, and profit thereby; for euen the rule of Reason, and generall experience shewes vs, that any fresh or quicke mould comming to the root of the Grasse, when it is in springing, must needes bee an infinit comfort thereunto, and make it prosper, and shoot vp with a double hast, and therefore I would haue euery husbandman to make much of the rubbish, sweepings, parings, and spyttings of his house and yard, as also of shouelings vp of the highwaies, backe lanes, and other such places, and especially, if they bee any thing clayie, or morish, or sandie mixt with any other soyle; for of them he shall find great vse, according to the husbandrie and experience already described.

Of soap-
ashes.

Lastly, there is not any thing that more enricheth pasture or meadow ground then Soape-ashes, being thinly scattered and spread ouer the same, and this labour

labour would neuer bee done at the latter end of Aprill, for then grasse is beginning to shoor vp, and at that time finding a comfort, the increase will multiplie exceedingly.

CHAP. XIIII.

How to enrich and make the most barrenest soyle to beare excellent good pasture or meadow.



O speake then of the bettering and enriching of these barren earths, and reducing them to good pasture or meadow, it is to be vnderstood, that there are but two certaine wayes to compass and effect the same, namely water or manure.

Two wayes
to enrich
earthes.

You are then when you go about this profitable labor, first to consider the situation of the earth, you would conuert to pasture, and to select for this purpose the best of this worst earth you can find, and that which lyes lowest, or els that which is so descending, as that the bottom thereof may stretch to the lowest part of the continent, for the lower that such grounds lie, the sooner they are made good, & brought to profit: Next you shal consider what burthen or grasse it bears, & whether the grasse be cleane and entire of it selfe (which is the best & likeliest soyle to be made fruitfull) or els mixt with other worse growths, as thistles, heath, broome, or such like, and if it be burthened with any of these naughty weed, you shal first destroy them by stubbing them vp by the rootes, and by burning the vpper swarth of the earth with drie straw mixt with the weeds which you shall cut from the same, then it shall be good for certaine nights both before

before the first and latter Spring to fold your sheepe vpon this ground, and that not in a scant manner, but very plentifully, so as the dung of them may couer ouer all the earth, and their feete trampling vpon the ground, may not onely beate in the dung, but also beate off all the swarth from the earth, that where the folde goeth, there little or no grasse may bee perceiued, then whilest the ground is soft, and thus trampled, you shall sow it all ouer with Hay seedes, and then with your flat board beetles beate the ground smooth and plaine, which done, you shall then strow, or thinly couer ouer the ground with the rotten staddels of Haystacks, and the moyst bottomes of Hay-barnes, and ouer that you shall spread other strong measure, of which Horse-dung, or Horse-dung and mans ordure mixt together is the best, or for want of such, either the measure of Oxen, Kine, or other Beasts, and this measure also you shall spread very thinne vpon the ground, and so let it lye till the Grasse come vp through the same, which Grasse you shall by no meanes graze or feede with your cattell, but being come to the perfectnesse of growth, you shall mowe it downe, and although it will bee the first yeare but short and very course, yet it skilleth not, for the ensuing yeares, shall inn the profit, and bring forth both so good grasse, and such plenty thereof, as reasonably you can require: for this is but the first making of your ground, and alteration of the nature thereof, neither shall you thus dresse your ground euery yeare, but once in twentie, or fortie yeares, hauing plentie of water to relieue it. When therefore you haue thus the first onely prepared your ground by destroying the barren growth thereof, and by manuring, sowing, and dressing it, you shall then carefully

search

search about the highest parts of the ground, and the highest parts of all other grounds, any way neighbouring round about it, and somewhat about the levell thereof, to see if you can find any Springs in the same, (as doubtlesse you cannot chuse to doe, except the ground bee of more then strange nature,) and the heads of all such Springs as you shall finde, you shall by gutters and channels draw into those ditches which shall compasse your meadow ground about, observing euer to bring the water into that part of the meadow-ditch which euer lyeth highest, and so to let it haue a currant passage through the ditches downe to the lower part thereof, and so into some Lake, Brooke, or other channell, and in this fort you may bring your water a mile or two : Nay I haue seene water brought for this purpose, three or foure miles, and the gaine thereof hath quit, the charge in very plentifull manner.

Of watering grounds.

But if you cannot find any Springs at all, nor can haue the helpe of any Lake, Brooke, Riuer, or other Channell of mouing water, (which is a doubt too curious, as being cast beyond the Moone) you shall then not onely cast ditches about this your meadow ground, but also about all other grounds which shall lye about, and that in such fort, that they all may haue no passage but into the vpper part of the meadow ditch, so that what raine so euer shall fall from the skie vpon those earths, it shall bee receiued into those ditches, and by them conueyed into the meadow ditch : and to augment the store of this water, you shall also in sundry parts of those vpper grounds which are about the meadow, in places most conuenient, digge large Ponds, or Pits, which both of theselues may breed, and also receive all such water as shal fall neare about them, and these Ponds or Pits being filled (as in the Winter

Helps in the watering.

M

time

time necessarily they must needs be (at every glut of raine) you shall presently by small draynes made for that purpose, let the water out from them into the ditches, and so into the meadow ditch, and so stopping all the draynes againe, make the Ponds or Pits capable to receiue more water.

When and
how to wa-
ter.

When you haue thus made your ground rich with water, and that you see it flow (as in the winter time necessarily it must) in plentifull manner through all your ditches, you shall then twice or thrice in the yeare, or oftner, as you shall then thinke meet in the most conuenientest places of the meadow ditch, stop the same, and make the water to rise aboue his bounds, and to ouerflow and couer your meadow ground all ouer, and if it be a flat leuell ground, if you let the water thus couering it to lye vpon the same the space of foure or five dayes or a weeke, it shall not be amisse; and then you may water it the seldomer. But if it lye against the side of a hill, so that the water cannot rest vpon the same, then you shall wash it all ouer, leauing no part vnmoistned, and this you shall doe the oftner, according as the weather shal fall out, and your water grow more or lesse plentifull.

The best
season for
watering.

Now for the best season or time of the yeare for this watering of meadowes, you shall vnderstand, that from Alhallontide, which is the beginning of November (and at which time all after-growth of meadowes, are fully eaten, and cattle for the most part are taken vp into the house) vntill the end of April (at the which time grasse beginneth to spring and arise from the ground) you may water all your meadowes at your pleasure without danger, if you haue water enough at your pleasure, and may spend or spare at your will; yet to doe it in the best perfection, and whereby your ground may receiue the greatest

rest benefit ; you shall vnderstand that the onely time for watering of your meadowes, is immediatly after any great Fluxe of rain, falling in the Winter any time before May, when the water is most muddy, foule and troubled, for then it carieth with it a soyle or Compasse which being left vpon the ground, wonderfully enricheth it, and makes it fruitfull beyond expectation, as dayly is scene in those hard countreys where almost no grasse growes but by this industry : And here you must obserue, that as you thus water one ground, so you may water many, having euer respect to begin with the highest, and so to let the water passe out of one ground into another vntill it come vnto the lowest, which commonly is euer the most flat and leuell, and there you may let the water remaine so long as you thinke good (as was before shewed) and then let it out into other waste ditches or riuers. And here you shall know that this lowest ground will euer be the most fruitfull, as well because it lyeth the warmest, moystest, and safest from stormes and tempests, as also because what soyle or other goodnesse this ouer-flow of water, or the raine washeth from other grounds, it lea- veth vpon this, and so dayly increaseth the fertilitie, from whence you shall gather, that at the first making of these medow grounds you may bestow lesse cost of manure and other charges vpon this lowest, flat, leuell ground, then on the higher : and so by that rule also obserue to bestow on the highest ground and the highest part of the highest ground euer the greatest abundance of manure, and so as you shall descend lower and lower, to lay your manure thinner and thinner, yet not any part vtterly vnfurnished and voyd of Compasse, yet as before I said you are to remember that these medow grounds need not this much vse of manure (having

this benefit of water, and the first yeares dressing as was shewed in the beginning of this Chapter) about once in twenty yeares ; nay it may bee not about once in a mans life time.

And here also is to be considered, that the water which cometh from Clay or Marle grounds, being thick, muddy and pudly, is much better and richer then that which cometh from sand, gravell or pibble, and so runneth cleare and smooth, for that rather doth wash away and consume the goodnesse of the ground, then any way adde strength therevnto.

CHAP. XV.

Of the enriching and dressing of barraine grounds, for the use of Hempe or Flaxe.

Grounds ill
for Hempe
or Flaxe.



YOu shall vnderstand that there are two sorts of grounds which out of their own natures vtterly refuse to beare Hempe or Flaxe ; that is, the rich stiffe blacke clay, of tough, solid, and fast mold, whose extreame fertilitie and fatnesse giveth such a surcharge to the increase of the seed, that either with the ranknesse, it runneth all into Bun and no Rinde, or else the seed being tender, and the mould sad and heauie, it buryeth it so deepe therein, that it can by no means get out of the same, but lies choaked and consumed without profit, the other is the most vilde and extreame barren ground, which by reason of the climate wherein it lies, is so exceeding sterile and vnfruitfull that it will neither beare these seeds, nor any other good seed ; and of these two soyles onely I purpose in this place to intreat, for with such soyles as will naturally and commodiously beare

beare these seeds, I haue nothing to doe, in that I haue sufficientlie written of them in mine *English Husbandman*, and *English Huswife*, which are Bookes onely for good grounds, but this for all such grounds as are viterly held without cure.

To beginne then with the stiffe blacke Clay, which al-
beit be very rich for Corne, is most poore for these seeds,
when you would reduce and bring it to beare Hempe or
Flaxe, which, neere vnto the Sea Coast, is of greater
price and commodity then Corne any way can be, espe-
cially adioyning vnto any place of fishing, in respect of
Nets & other Engines, which is to be made of the same,
and which being daily wasted and consumed, must like-
wise be daily replenished: You must first with a strong
plow, fit for the nature of such land, plow vp so much
ground as you intend to sow Hemp or Flaxe vpon, about
the middest of May, if the weather be seasonable, and the
ground not too hard: if otherwise, you must stay till a
shower doe fall, and that the earth bee moistned, then
shall you hacke it and breake the clottes in small pieces,
then with the salt Sea sand, you shall sand it very plenti-
fully, but if that be not to be gotten, and that you be ve-
rie well assured of the naturall richnesse of the earth, you
shall then sand it with the best red sand you can get or
find neere vnto you, and vpon euery Acre of ground you
thus sand with fresh sand, you shall sow three bushels
of Bay-salt, and then plow vp againe the earth, sand and
salt together, which would be done about the latter end
of the yeare, as after Michaelmas, and so let the ground
rest till seed time; at which time you shall first before
you plow it, goe downe to the low rockes on which the
Sea beats, and from thence with dragges and other En-
gines, gather those broad leaued blacke weeds, which are

Blacke clay
for Hempe,
&c.

called Orowood, and grow in great tufts and abundance about the shoare, and these Weeds you shall bring to your Hemp-land, and couer it all ouer with the same, and then you shall plow it againe, burying the weeds within the earth: And herein is to bee obserued, that in any wise you must lay these weeds as wet vpon the land, as when you bring them out of the Sea, provided still that you adde no other wet vnto them but the salt-water, for so they are of all soiles or measures whatsoeuer, the onely best and fruitfullest, and most especially for these seeds, and breed an encrease beyond expectation.

When you haue thus plowed ouer the ground, you shall then hacke it againe, then sow it with either Hemp or Flax seed, which you please; and after it is sowne, you shall then harrow it (and not before) and you shall bee carefull to harrow it into as fine mould as you can, & this mould is likeliest to runne fine enough, as well by reason of the fertilitie, as also of the mixture; yet what clots you cannot breake with your Harrowes, those you shall breake with your clotting Beetles, and such like Toolles: then after the first great shower which shall fall after your sowing, you shall runne ouer your land thus sowne with your backe harrowes, that is, with a paire of large Harrowes, the wrong side turned vward, to wit, the teeth turned from the earth, and the backe towards the earth; and if need bee, you shall lay vpon the harrowes some indifferent heauie peece of Wood which may keepe the backe of the harrowes closer to the ground, and so goe ouer all the earth, and lay it as smooth and light as is possible, without leauing the smallest clot that may be vnbroken. Now if the ground be sowne with Hempe, you shall not thinke of weeding it at all, because Hempe is so swift a grower, and such a poison vnto all Weeds, that

Weeding.

that it ouer-runnerh, choaketh, and destroyeth them; but if it be sowne with Flaxe or Lyne, which is a much tender seed, and bringeth forth more tender leaues and branches, then you shall watch what Weeds you see spring vp, and in their first growth plucke them vp and cast them away till you behold your Flaxe or Line to bee growne aboue the Weeds, and then you may let it alone also, for after it hath once gotten height, it will not bee ouergrowne with Weeds.

Now touching the other soile, which through the extreame barrenness therof, refuseth to bring forth any good fruit at al; you shall in all points dresse it as you drest your plain clayes, described in the 2 Chapter of this book, beginning at the same time of the yere that is then appointed, or (if more necessary occasions hold you) if you begin later it shall not be amiss, & then at *Michaelmas* you shall plow it ouer the second time, and meanure it with the sea weeds, and so let it lie at rest vntill *March* (which is seed time) and then plow it againe, and meanure it with the sea weeds againe, and after the plowing you shall hack it, and if in the hacking you find the earth stiffe & rough, then you shall harrow it before you sow it, then sow it and harrow it againe, breaking the earth so small and laying it so smooth as possible you can, vsing the helpe both of the clotting beetles & all other tooles which may be available for breaking the earth, and making the mould as fine as any ashes, then after the first great shower of raine, perceiuing the ground to be wel moistned, you shall instead of the backe harrowes (which vpon this earth may be too light) take the great rouler which is described in the book of the *English Husbandman*, being a great round peece of Timber of many squares, drawne either by horse or oxen but a single Horse is the best, both in respect of much treading

Making of il
earth beare,
&c.

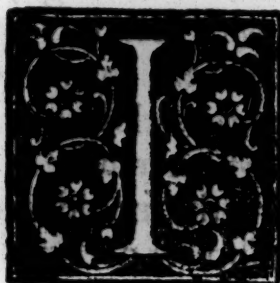
treading the ground, as also for the swift going away or drawing of the same: for the swifter it is drawne, the better it breaketh the ground, and the lighter it leaueth the mould: and with this Rouler you shall run ouer and smooth your ground very well, leauing no clot vnbroken, and so let it rest.

Weeding.

As for the weeding of this ground, you shall not respect it at all, for naturally it will put vp no weed, the very ground of it selfe being a very great enemy thereunto, nor shall you need to dresse this ground in the forme before said, aboue once in eight or ten yeares: onely euery seed-time when you plow it, (as you shall not need to plow it at any time, but seed-time onely) you shall before the plowing, couer or meanure the land with the Sea-weed before spoken of, which will giue strength enough to the ground, without any other assistance.

CHAP. XVI.

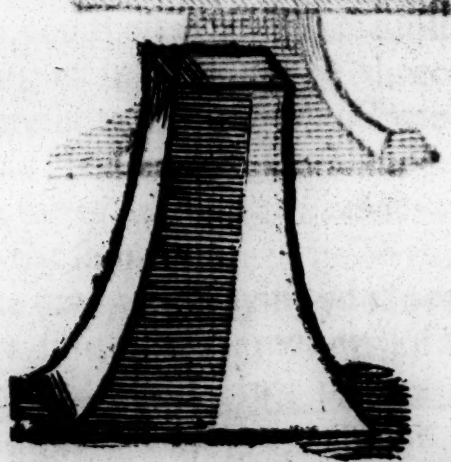
The manner of stacking of all kind of Graine or Pulse with greatest safety, and least losse.



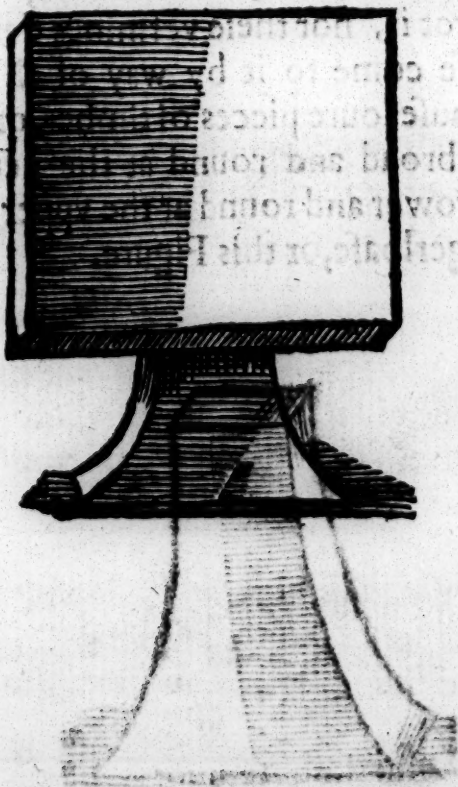
IN these barren and hard countries, of which I haue formerly written, all sorts of buildings are exceeding costly and scarce, both in respect of the clime, which is commonly most extreame cold, mountainous, and much subiect to storme and tempest, as also through the great want of Wood and Timber, which in those hard soiles doth hardlie or neuer prosper; and therefore in such places building must be both small and deare, so that it will be verie hard for the Husbandman to haue houseroome for all his Corne, but that of necessitie hee must

must be enforced to stacke much or the most part of his corne without the doores, which albeit it be a thing very vsuall in this Kingdome; yet is it in many places so insufficiently done, that the losse which redounds thereby (partly by the moisture of the ground, which commonly doth rot and spoile at least a yard thicknesse of the botome of the Stacke next the ground, and partly through Mice, Rats, and other vermine, which breeding in the Stacke, doe eat and deuoure a great part thereof, as also through many such like negligent causes) is greater then a good Husband may with his credit be guiltie of, or a profitable Husband will by anie meanes suffer to be lost so negligently.

To shew then the manner how to stacke or mow your corne without the doores, in such sort, as neither the ground shall rot it, nor these vermines destroy it, nor anie other losse come to it by way of ill husbandrie, you shal first cause foure pieces of timber, or foure stones to bee hewed broad and round at the nether end, and somewhat narrower and round at the vpper end, like the fashion of a Sugarloafe, or this Figure.



And these peeces of wood or stone shall be in length three foot or thereabouts, and in compasse or bredth at the bottome, two foot, or a foot and a halfe, and at the top not above one foot; these foure peeces of wood or stone you shall place in your stack-yard, or other conuenient place neere your thrashing floore, and you shall place them foure-square, of an equall distance one from another, then you shall cut out foure smooth boards of two inches and a halfe thicke at the least, and full three foot square euerie way, and these boards you shall lay vpon the heads or narrow tops of these stones or peeces of timber, according to this Figure.



Then shall you take strong ouer-lyers of Wood, and lay them foure square from one board to another, according to this Figure.



And then vpon those ouer-lyers you shall lay other smaller poles close one by another, and then vpon them you shall mow or stacke all your Corne, whether it bee Wheat, Barley, Oates, Pease, or anie other kind of graine, and be sure if you make your stacke handsome and vp-right, which consisteth in the Art and Workmanship of the workman, you shall neuer receiue losse in your corne, for the raising of it thus two or three foot from the ground will preserue it from all moisture or hurt thereof, and the broad boards which cover the foure ground posts will not suffer anie Mice of other vermine to ascend or come into the same.

Now for the manner of laying your corn into the stack you shall bee sure to turne that part of the sheafe where the eares of the Corne lie euer inward into the Stacke, and the other which is the straw end, you shal euer turne

outward, and by that meanes you shall be assured that no flying fowle, as Pigeons, Crowes, and such like, can doe you any hurt or annoiance vpon the same: Lastly, you shall vnderstand, that you may make these stackes either round, square, or long-wise, yet round is the safest, and if you doe make them long-wise, then you shall set them vpon sixe ground posts, or eight, according to the length and proportion you would haue it, and after your stack is made, you shall then thatch it verie well to keepe out the wet; also if when you doe stacke your wheat, you doe top your Stacke with Oates or other course graine, it will be so much the better, and the wheat will lie in greater safetie, for no part of a Stacke well made, especially a round Stacke, will so soone take wet or hurt, as the toppes thereof.

CHAP. XVII.

The diseases and imperfections which happen to all manner of Graine.



Albeit the manner of stacking and laying vpon of Corne or Graine in the forme before shewed, may to euerie one giue an assurance for the safe and profitable keeping thereof as long as it endureth therein, and abideth in the care, yet because diuers necessities may compell the Husbandman to thrash out his Corne, as either for present vse of Straw, Chaffe, Garbidge, or other commodities needfull vnto him (as the season of the yeare shall fall out) I thinke it most necessarie in this place to shew how all manner of Graine and Pulse, of what nature soeuer may most safelie and profitably be kept from all manner of annoiances, or corruptions whatsoeuer, being

being a worke of that vtility and goodnesse, that nor any belonging to the Husbandman doth exceed it: Nor shal it be sufficient to shew the offences and diseases of Graine with their cures and healthfull preservations, whilst it is in the Husbandmans possession, but also whilst it is in the earth, and at the mercy of cold, heat, moistnesse or drinesse, and not onely subiect to the malignant influences of starres and planets, with the increasing and decreasing of the Moone and her operations: but also of diuers other hurtfull vermin; as birds, wormes, pismires, dorres, snails, moales, and other such like: some whereof consume and deuoure the grain ere it sprout: others in sprouting when the kernell is rotten and turned to a sweet substance, and others after it is sprouted by devouring the first tender leaues before they haue strength to appeare aboue the earth, being as it were but soft white threds not changed into the strength of Greene, because the aire and Sunne hath not yet lookt vpon it.

To begin then with the first enemies of corne or graine after it is throwne into the earth, there is none more noisome then *Crowes* and *Choughs* and other smaller birds, which flocking after the seeds man, will in a manner deuoure and gather vp the graine as fast as it is sowne, for as according to the old saying, *That many hands make light worke*, so many of their mouthes (being creatures that euer fly in flocks together) and their much nimblenesse in deuouring, soone rob the earth of her store, and deprive the labouring Husbandman of very much profit, and the graine which these creatures doe most consume, is all manner of white corne, as wheat of all kinds, barley of all kinds, rye and oates, as also hempseed, linseed, rapeseed and such like: Neither are they onely offensive during this time of sowing, but also after it is

Crowes, Pigeons, and Birds.

sowne and covered, digging it with their strong bills out of the earth, and so making the waste greater and greater.

The cure.

The preuention or cure for this euill, is diuers, as the affections of people, and customes of countreys doe instruct them, for some (especially the French-men) vse when they sow these graines or seeds, first to sprinkle it with the drops or lees of their bitterest oyles, which when these deuouring foules doe taste, they refuse to doe any further hurt: Others vse to sow Pigeons dung or Lynne with their seed, which sticking vnto the graine, the vnauourinelle thereof will make the fowle cast vp the graine againe, and leaue to doe further hurt: But forasmuch as these medicines cannot euer be had, nor are euer wholesome for every ground, the onely best and safest means to preuent this euill, is to haue euer some yong boy with bow and arrowes to follow the seeds-man and Harrows, making a great noise and acclamation and shooting his arrowes where he shall see these deuourers light, not ceasing, but chasing them from the land, and not suffering them at any time to light vpon the same, and these ser- uants are called Field-keepers or Crow-keepers, being of no lesse vse and profit (for the time) then any other ser- uant whatsoever, nor is it sufficient to haue these Field-keepers for the bare time of seed onely, whilst the graine is in sowing, but he shal also maintaine them till such time as you see the graine appeare aboue the earth, which for Wheat or Rye, because they are Winter-seeds, and so longer in sprouting will aske a full moneth, for all other seeds which are sowne in the Spring or Sommer, a fortnight is full sufficient, and this Field-keeper shal not fail to be in the field an houre before Sunne in the morning, and so continue till halfe an houre after Sun-set in the euening;

euening; for at the rising and setting of the Sunne, is euer done the greatest mischief, for then all creatures most eager and hungry: and though the indurance may promise much paine and trouble, yet questionlesse the labour to any free spirit, is both easie and pleasant.

Also if your Field-keeper in stead of his bow and Ar-
rowes doe vse to shoot off a Musket, or Harquebush, the
report thereof will appeare more terrible to these ene-
mies of corne, and the profit thereof will be a great deale
more: for a shot or two of powder will fane more corne
then a weekes whooping and shooting; onely you must
obserue that your Field-keeper vse no Bullet or Haile-
shot, for so he may turne scarring to killing. Now touch-
ing the destruction which these creatures make of corne
after it is stackt vp; by tearing of the thatch, and digging
holes and pits therein, to prevent that, you shall cause the
Thatcher to scatter vpon the Thatch great store of ashes
of any kinde or else Lyme, that as the Pigeons or Crows
teareth vp the straw, the lyme or ashes may sparkle into
their eyes and nards which they will not indure: as for
those parts of the Stacke which cannot be thatched, as the
sides and ends; vpon them you shall pricke diuers scarre-
crows, as dead crows, or dead Pigeons, or any other rags,
or the shape of a man, made either of thumb-ropes of hay
or straw, or else some old castaway apparell stopt with
straw, and so fixed on the stacke; also in this case you
may vse Clap-mills, or such like toyes which make a great
noyse: But to conclude the best preuention for these crea-
tures (if you want abilitie to maintaine a Field-keeper) is
to take long lines of packthread, and in them to knit di-
uers feathers of diuers colours, especially white ones, and
with a little stakes so to fasten them ouer the Corne, that
with euery breath of winde the feathers may dance and

Additions.

turne

turne about, and the nearer that these Blinks or scarres come to the ground (when the corne is new sowne so much the better it is, lest the fowle finding a way to creep vnder them, begin not to respect them; so that a hand or two from the ground is sufficient, provided that the feathers and scars haue liberty to play and moue.

But if it bee to saue Corne in the ripening, that is to say, a little before it bee reapt, when the eare begins to harden, or when it lyeth in single sheafe vpon the land, for then fowle and birds doe as great mischief, as at any other season, it shall then bee fit that you raise these lines or scarres vpon higher stakes, so as they may play as much about the tops of the eares of corne as before they did about the earth; and amongst these scars thus made vpon lines in sundry parts of the field, you shall vpon other stakes place many other bigger scars, as dead crows, pies, gleades, pigeons, or such like; as also the proportions of man formerly shewed you, or any ragges of cloth being blacke, foule, and vgly like bakers malkins, and than this there is no safer way for the defence of graine or corne from these birds, and such like.

Of Pismires.

The next great deuourers or consumers of graine are Pismires or Ants, which although it bee but a little creature, yet it is so laboursome, that the graine which they carie away or destroy by eating, amounteth to a great quantitie, and the mischief which these little Vermin doe, is after the corne is couered in the ground, and before it sprout, for they creeping in at the little chinkes of the earth, and finding the corne, either drag it out, or eate it; so that it cannot grow, and the graine which they most hurt, is all manner of white corne, especially your finest and smallest Wheat, for the skin or hull is thinnest, and the kernell whitest and sweetest: also to barley they do much

much hurt, especially, that which is fullest and best, and likewise to Rye, Hemp-seed, Lin-seed, and Rape-seed; as for Oats, because it is double hull'd, and also your great hole straw wheat and Polard wheat which is thick huld, their hurt is not so much to them, and vnto pulse nothing at all, because they are too heauy, too thicke skinned, and too bitter in taste.

The best cure or prevention for these Pismires is to search your corne fields well, especially vnder hedges and old trees, and on the tops of moale-hils, and if you find any beds or hils of Ants or Pismires, presently after Sun-setting with hot scalding water to drowne the beds or hils, or with wet straw and fire to make such a smoake vpon them as may smother them to death, also if you measure your corne lands with ashes, lime or salt sand, you shall be well assured it will never breed Pismires.

The cure.

Next vnto these, your Dores, or great blacke Clockes are vehement destroyers of all kinde of corne both white corne and Pulse, whilest it lyeth dry in the earth, and before it sprout, for after it beginneth to rot, they doe no more touch it, and these Dores destroy it in the same manner, as the Pismires do, by creeping in at the small creuies of the earth, and finding the graine doe as long as it is dry feed thereon, and though they are no hoarders, or gatherers together of the graine, keeping it in heapes in dry places as the Pismires and other vermine doe, yet they are great feeders thereon and that continually, besides they will euer chuse out the fullest and best corne, leaue the leaner, whereby they doe the Husbandman a double iniury, as first to deuoure, and then to deuoure but the best onely.

Of Dores.

The cure or prevention for these Dores, or blacke Clockes, is in Seed-time to make great smoakes in your
O corne.

The cure.

corne-fields, which wil presently chafe them from thence for they are the greatest enemies that may be to all manner of smoake: but if that bee not sufficient, then immediately before you sow your Corne, you shall very lightly sow your land with sharpe Lyme, and whensoever the Dore shall finde the smell or taste thereof, presently hee will depart, or if hee eate of the graine that toucheth the lime, it is as present poison vnto him, and he there dyeth.

Of field Rats
and Mice.

After these, your field-Rats and Mice are very vehement destroyers of all manner of graine or seeds before they sprout, especially all sorts of wheat, and all sorts of pulse, because for the most part those kinde of graines in many soyles are sowne vnder furrow, and not harrowed, so that the furrowes at first lying a little hollow, these vermines, getting in betweene the earth and them, will not onely deuoure and eate a great part of the graine, but also gather together great heapes thereof into their nests, as is often scene when at any time their nests are found, some having more, some lesse, according to their labours: And albeit in other soyles where the graine is sowne aboue furrow, and so harrowed in and laid much more close and safe, they cannot doe so much hurt as in the former, yet even in these they will with their feet digge out the corne in great abundance, and though in lesse measure, yet doe hurt that is vn sufferable; so that to conclude, neither Rye, Barley, Oates, nor any other smaller and more tender seeds are free from their aunoyance and destruction.

The Cure.

Now the cure and preuention for these Field-Rats and Mice are diuers, according to the opinions of diuers authors, and diuers of our best experienc't Husbandmen: for some vse in the Dog dayes, or Canicular dayes when the fields

fields are commonly bare, to search out the holes and nests of these Rats and Mice, which are easily knowney being little round holes in the earth made so round and artificially as if they were made with an Auger, no bigger then the bodie of the Creature that was to lye in it: and into these holes they vse to put a few Hemlock Seeds, of which when the beast tastes it is present death vnto them: Others vse to sprinkle vpon the land, *Hellebore* or needling powder mixt with Barley meale, of which the Mice and Rats will greedily feed, and it is deadly bane and present death vnto them. Lastly, (and which is the best medicine) if you take a good quantitie of ordinary greene glasse beaten also, to powder, and as much Copporas or vitriall beaten also to pound and mixe them with course honey, till it come to a paste, and then lay it in the holes and most suspicious places, and it will neither leaue Rat nor Mouse about all your fields, but sodainely destroy them.

The next great destroyers of Corne and Graine, are wormes, and they destroy it in the sprouting, then when the ground hath rotted it, and the white or milkie substance breaking open the vpper huske, shooteth forth in little white threds at both ends, vpon which whilest it is so moist and tender the worme feedeth extreamly, and so deuouring vp the substance or sperm, is the cause that the corne cannot grow or get out of the ground, and these wormes being as it were the maine citizens within the earth are so innumerable that the losse which is bred by them is infinite.

Now the cure or preuention for these wormes is diuersly taken: for some Husbandmen vse, but onely to strike into the plow rest, and vnder the lowest edge of the shalbord certaine crooked spikes of iron of great

nayles halfe driven in, and turned backe againe, with which as the plow runnes tearing in the ground, and turnes vp the furrow, those pieces of iron kill and teare in pieces all such wormes as are either within or vnder the furrowes that the plow casts vp, and this is sure a very good husbandly practice, but not sufficient for the destroying of such a secret hurtfull vermine which is so innumerable, and lies so much concealed; therefore more curious husbands vse besides this helpe of the plow, to take oxe dung and mixe it with straw, and then to burne it vp in the land, making a great smoake ouer all the land, immediately before you plow it for seed, and it is thought that this will kill all the wormes which lye so hye in the earth, as to hurt the Corne; Others vse before they make either the mixture or the smoake to wet the straw in strong Lye, and then adding it to the dung, the smoake will be so much the stronger, and the wormes killed the sooner, or if you sprinkle strong lie vpon your seed before you sow it, there is not any worme that will touch the graine after: Also, if you take hempe and boile it in water, and with that water sprinkle your seed before you sow it, not any worme will come neare to touch it.

Of Rye not
to be wet.

Yet it is to bee obserued in this rule of wetting your seed Corne, that by no meanes you must wet your seed Rye, for it is a graine so warre and tender that it will neither endure cold, wet, nor stiffe ground, insomuch that the plowman hath a Proverbe, that Rye wil drown in the hopper, that is to say, it must neither be sowne on wet ground, nor in a wet day, since present shewes are apt to destroy it: lastly, it is thought that oft plowing of your ground in the wane of the Moone is a very good meanes to destroy wormes. Touching that practice which many vse, to gather the wormes from their lands at Sun-rise,

in

in bright dewie mornings, and Sun-set when the wormes couple aboue the earth, I hold it more fit for small gardens, then large Corne-fields.

The next great destroyers of Corne are Snailes, and they destroy it after it is sprouted, feeding vpon the tender white threds and rions which start from the seed and would rise aboue the earth, being the stemme or stalk on which the cares should grow (were it not deuoured and eaten vp by these Snailes, and such like vermine) as soon as it begins to peepe vp, or as it were but to open the earth, whereby it is driuen backe and forced to die in the earth: for these creatures sucking vpon the tender sweetnesse, depriue it both of life and nourishment.

Of Snailes.

The cure and preuention for this euill, is to take the foot of a Chimney, and after your Corne hath beene sowne a weeke, or ten daies, or within two or three daies after the first shower of raine which shall fall after the corne is sowne; you shall sow this foot of the Chimney thinly ouer the land, and not a Snaile will endure to come thereon: Others vse (especially in France and those more fertile Countries) to take common Oile lees, and after the Corne hath beene sowne and is ready to appeare aboue ground, to sprinkle it all ouer the Lands, by which meanes no Snaile or such like creature will endure to come neere the same.

The cure.

The next great destroyer of Corne is accounted the Grasshopper, and he also destroyeth it after it is sprouted and appeareth aboue the ground, as the Snaile doth, but somewhat more greedilie, for he not onely feedeth on the tender white strings, but vpon the first Greene leaues that appeare also; by which meanes the Corne is not able to spring or bring forth a stemme or stalke to beare the care vpon; or if it doe put forth anie, yet it is so small, weake

Of Grasshoppers.

and wretched, that the eare growing on the same, is withered and leane, and the graine drie and blasted, and no better then Chaffe; nor is there anie Corne that escapeth the destruction of the Grashopper, for he generallie feedeth on all: First, on Wheat and Rie, because they are the earliest, then on the Barlie and Oates, and lastly on Pulse, vpon whose leafe and blossome hee feedeth whilest the first is sweet and pleasant, or the other Greene.

The cure.

Now the cure or preuention for these Creatures, is according to the opinion of some Husbandmen, to take Wormewood and boile it well in water, till the strength of the Wormewood be gone thereinto, and then with that water in the month of May to sprinkle all your corne ouer when the Sunne is rising or setting: and not anie Grashopper will come neere or annoy the same. Others vse in stead of Wormewood to boile Centurie, and to vse the water thereof in the same manner as aforesaid, and find an equall and like profit in the same, but it is most certaine that anie bitter decoction whatsoeuer, vsed and applied as aforesaid, will not leaue one Grashopper about your Fields, for anie bitterness is such an enemy vnto them, that they cannot liue where they feele anie taste thereof.

Of Moales.

The last offence of liuing Creatures belonging to corn or graine, are Moales, which not onely feed vpon it after it is sprouted and spindled by eating vp the roots thereof, and so consequently by killing the whole Corne: but also by their digging and vndermining of the earth, doe root vp the Corne and destroy it in most wonderfull manner, for where they make their haunts, or are suffered to digge, there they will destroy almost halfe an Acre in a day, neither make they choice either of Ground or Grain, for all grounds and Grains are alike, if the ground

be not too wet, or subiect to inundation or overflows (as for the most part Corne grounds are not) for aboue all things Moales cannot endure wet ground or earth of too moist qualitie.

Now the best cure or preuention against these creatures, is to find out their trenches and passages which are most plaine and easie to be knowne by the turning vp of the new earth, and digging crosse holes in the same, to watch either the going forth, or the comming backe of the Moale, and when you see her cast to strike her with an iron forke made of manie graines, as eight or sixe at the least, and so to kill and destroy them; which still is so generally knowne amongst Husbandmen, that it is become a trade and occupation amongst them, so that it needs no further description, and the rather in as much as for 3 d. or 4 d. a score, you may haue anie ground clenfed of Moales whatsoeuer. Now there be some others which haue not this art of killing or catching of Moales, which onely doe take brimstone and wet stincking straw, or anie thing else that will make a stincking smoake, and putting fire thereto, smoake all the places of their haunts; and by that meanes driue them all cleane away from the corne-lands: many other practices they haue, but none so good, certaine, and probable as these already declared.

Thus far I haue spoken of those offences which proceed from liuing creatures, I will now intreat of these which come & grow from the Influence of the heauens, being malignant vapours which striking into the earth doe alter the sweet and pleasant nourishment thereof, and change it into bitternesse and rottennesse, whereby the Corne is either slaine outright, withered and made leane and vnkindly, or else the kernell turned to a filthy blacknesse, being bitter, drie, and dusty, like vnto smoake, which

The cure.

Offences
from the in-
fluence of
the heauens

Of smuttineſſe and mildew.

the Husbandman calleth smuttineſſe or mildewing, and yet this smuttineſſe or mildewing commeth another way, as namely by ouer-ranckneſſe, or too much fatneſſe of the earth, and this happeneth moſt commonly onely to wheat, for if blackneſſe happen to anie other Graine, it commeth of blaſtings or other malice of the Starres, for ranckneſſe of the ground in Barlie, Rie, or Oates, onely makes them lie flat to the ground, the ſtalke not being able to ſupport the multiplicity of the eares, and ſo by that meanes the graine wanting his true nouriſhment, growes light, withered, and of no validitie; now that this is moſt eaſie to be found out, the ranckneſſe of the growing corne, riſing as it were in cloſe bundles together, and the deepe blackneſſe of the greene blades will with ſmall trauell ſhew you.

The Cure.

This to cure and preuent, it ſhall be good before you ſow your Graine, to ſow your land lightly ouer with fine chalke, for that will abate his ouer-ranckneſſe.

Additions.

There bee other malignant qualities which proceed from the influences of the Heauens, or rather from the qualities of the Planets or Elements which doe manie dangerous hurts vnto Corne, as namely the Haile, the Lightning, the Thunder, and the Planet-ſtrooke or Blaſting, for all which the ancient Husbandmen haue ſuggeſted ſeuerrall Cures, as namely for the Haile, to plant the white Vine, or ſticke the branches thereof in the corn Field. For the Lightning, to cloſe a hedge Toade in an earthen pot, and burying her in the Corn field, or to hang vp the feathers of an Eagle, or a Seale ſkinne, or to plant Lawrell therein: For the Thunder, to ring Bels, to ſhoot off great Ordnance, or to burne ſtinking weeds in the Corne field: And for Blaſting, to take the farre horne of an Oxe, and mixing it with dung, to burne it in the corne.

corne-field, or to take the branches of the Bay tree, and to plant them in the corne-field : But in as much as all these, and manie other the like, smell rather of coniuration, charme, or exorcisme, then of any probabilitie of truth; I will neither here stand much vpon them, nor perswade anie man to giue further credit vnto them, then as to the vapours of mens braines, which produce much manie times out of meere imagination; and so I will proceed vnto those things which are of farre greater likelihood.

The next euill which happeneth vnto corne or grain, Of frosts. is that which commeth by frosts and sharpe nipping colds, which staruing the root, and binding vp all nourishment, maketh the corne drie, wither, and neuer prosper; and then the violence of the frost, there is nothing more bitter to plants and seeds, for euer Raser-like it cutteth the veines and sinewes in pieces, and as sharp needles pricketh the heart of euerie growing thing, for as the fire which is most hot, when it rageth, burneth and consumeth all things, so the frost which is most cold when it continueth, starueth and choaketh or stiflith whatsoever it imbraceth.

Now the cure or preuention for those euils which doe happen to Graine by these great Frosts, is as The cure. some Husbandmen suppose, to couer the land ouer when it is sowne, with ashes, others spread straw or rotten litter vpon their corne, and not any of them but is sufficient to preuent the worst iniurie that the frost can doe.

The most malignant qualirie which offendeth graine, Mists and fogges. is myst & fog, which being naughty vapours drawn from the infected parts of the earth, and falling vpon the corn, do not onely make the graine leprous, but also infecting
P the

the better earth alter the kindly nourishment thereof, and as it were distilling corruption into the veines, makes all that depend thereupon most leproous and vnwholesome, and thereby altereth the quality, quite turning sweetnesse into bitternesse, fulnesse into emptinesse, and goodnesse into badnesse, to the great losse of the Husbandman, and the much disreputation of the ground.

The cure.

Now the cure and preuention of this euill, according to the opinions of all the best Husbandmen, is to take weeds greene, the twigs of brambles, and other brush wood, wet straw or any such like stuffe, and binding them in great bundles, to put fire thereto, making a great and violent smoake, and then taking the aduantage of the wind, to walke vp and downe the field and smoake it, which is thought a certaine remedie to take away those inconueniences which happen by violence and poison of these mysts and fogs.

Corne reapt
wet.

Now to conclude the diseases and infirmities which happen to Corne whilst it is in the field, there is not any formerly spoken of more dangerous or of vilder qualitie then the reaping, mowing, or gathering in of Corne, wet or too greene, and vnhardened, for such moisture when the corne is either sheaffed vp close together, or stackt or mowed vp, forthwith gathereth heat, and either setteth the Corne on fire, or else the moisture being of lesse quantity, and not apt to flame, yet it corrupteth the graine and straw, and breedeth a stinking mouldinesse or rottennesse about it, so that the graine either becomes dung and durt, or at least so stincking and vsauoury that it is good for no vse or purpose, as is daily seene where carelesse husbands gather in their graine without respect or government, making the old Proverb good, That haste euer brings wast.

The

The cure and preuention of this euill, is the well hus- The cure,
banding and managing of the haruest, as first with a care-
full and well iudging eye to looke vpon your corne, and
to know by the hanging downward of the eare (looking
as it were backe to the ground) and by the hardnesse of
the Graine, whether it be ripe or no ; then to looke into
the cleannes of the corne, as whether it be full of greenes,
as grasse, weedes, and such like : or cleane of it selfe with-
out any mixture : if you finde there be many weeds mixt
with it, then you may reap it so much the sooner, though
the kernell be not so well hardned as you would wish, and
aboue all things haue a care neuer to sheare corne in the
raine or wet, no not so much as with the mornings or
euenings dew vpon it, but euen in the heate and bright-
ness of the day. Then hauing reapt your Corne so full of
grasse and weedes, you shall by no meanes sheafe it, but
spreading it thin in the Sunne, let the grasse whither all
that day ; which when you perceiue to change colour &
grow dry, then binde it vp in sheafes, and let it lie single
a day, that the winde and Sunne may get into it, and dry
the greenes more sufficiently ; then lay it in stouckes of
fixe or eight sheafes apeece, & turne the eares so inward
that the other bigger ends may defend them from all
raine, wet or dew that may fall vpon them ; then a day or
two after, lay them in stouckes of twenty or of foure and
twenty sheafes apeece, and in those stouckes let them take
a sweat, then breake them open in a bright Sunne shine
day, and letting the ayre passe thorow them to dry them,
forthwith leade the graine home, and house it or stacke
it in such sort as was shewed in the former Chapter, and
be sure the graine thus ordered and dryed can neuer take
hurt : but if the season of the yeare fall out so extraordi-
nary euill, and full of wet, that by no meanes you can get

your Corne dry home, (which, although it be seldome scene, yet it is possible to be scene) in this case you must bring it home as well as you can, and having your Kilne well ordered and bedded, you shall lay as many sheaves thereon, as it can containe, and turning and tossing them ouer a very gentle fire, by slow degrees dry them very perfectly as neare as you can, with no greater a heat then that which the Sunne giueth, and then moow and stacke them vp at your pleasure, for the ayre will sweeten them againe, and take away all smell of smoake or other annoyance: onely obserue, not to stacke them vp whilst the fire or heat is in them, but when they are cold, and so they will be as sweet as may be.

Of Corne
washt.

Now it is not amiss that I speake here a word or two of washt corne, or the washing of corne; True it is (as before I haue written) that all sorts of Wheat whatsoever are subiect, either by the rancknes of the ground, blasting, or else myldewing, to a kinde of filthy sooty blacknes, as is already shewed; and this sooty Corne is taken two wayes, generally and particularly: generally, if the whole land be stricken, and no corne saued, but all spoiled, which is called mildewed: or particularly, where but some certaine eares are stricke, or some certaine part of the graine, as when it is blacke at both ends, yet full and sound in the midst, and this is called smutcht Corne, being disfigured in part, and not in all. This smutcht corn which is stricken here and there, if the blasted eares be not culled out from the other, (which to doe is an husbandry exceeding good and very worthy) when it commeth vnder the flayle, the dust of those blacke blasted eares will so foule all the rest of the corne, that it will looke blacke and ill-fauoured, and so become vnseruiceable and vnmarketable, for the blasted corne is both bitter and vnwholsome;

wholesome: In this case you must of force wash this corne, and you must doe it in two or three waters, till you see all the blacknesse quite gone; which done, then draine away your water cleane, and laying the corne on faire window-cloathes, or couerlids, lay it in the heat of the Sunne, and so dry it againe till it bee so hard that it will grind: But if the time of the yeare will not serue for the Sunnes drying it, then you shall dry it on a kilne with a very soft and gentle fire, and then coole it in the ayre to recouer the sweetnesse againe, and then the corne is as seruiceable as any other, onely for seed it will by no meanes serue, both by meanes of the blasting, which makes the kernel imperfect at both ends, where it should sprout, as also the too much drying therof, by which it is so much hardened that the ground hath not strength to resolue it, therefore it is the office of euery husbandman when he chuseth his seed-corne, to eschew by al means this washt corne as a graine that is lost in the earth, & wil by no meanes grow.

Therefore that you may know washt corne from all other corne, and so not be cozened by any deceit in the ill husbandman, you shall take it vp into your hand, and if the corne looke bright, cleere, and shining, being all of one entire colour without change or difference, then bee sure the corne is vnwasht and perfit.

But if you finde it looke whiter at the ends then in any other part of the corne, and that the whitenesse is blacke and not shining, so that there is a changeable colour in the corne, then be assured that the corne is washt, and then by no meanes apt for seed or increase.

Againe, put three or foure graines into your mouth and chaw them, and if then the taste bee sweet and pleasant, and grind mellow and gently betweene your teeth; then is the corne not washt, but if it haue a bitterish, or flashy

taste, and grind hard betweene your teeth, or with much roughnesse, then hath the Corne beene washt and dried againe, and is not good for seed: also when corne is more then ordinarily moist, or more then ordinarily dry, both are very ill signes, and shew either imperfect Corne, or imperfect keeping, for the best and good Corne indeed euer holdeth an indifferent temperature betwixt drinesse and moisture.

CHAP. XVIII.

How to keepe all manner of Graine, either thrasht or unthrasht with least lasse the longest time, and how to preserve it from all infirmities and vermine in the house or garner.

Keeping of
corne two-
fold.



SO proceed to the keeping and preserving of Corne and Graine, it is to be vnderstood that it is to be done two severall wayes; that is to say, in the eare and out of the eare, in the stack when it is ioyned with the Straw & Chaffe, or in the Garner when it is clenfed and dressed.

Keeping
corne in the
eare or in
the chaffe.

Touching the keeping of Corne in the Eare or in the Stack, there is no better or safer way then that already described in the sixteenth Chapter, being free from all offences whatsoeuer that can come to hurt it.

Now there bee others that cut off the eares of their Corne, and then put them into great Chests or Hatches of wood, (such as are very frequent and much in vse in Ireland and other Countries where warre rageth) and so keepe it sweet and good many yeares: Others vse to beat it out of the Eare, but not separate it from the Chaffe, and then laying a leare of Strawe more then a foot thicke, to lay a good thicke leare of the threshed corne, then another leare of Strawe, and so a leare of threshed
Corne,

Corne, and thus lay leare vpon leare, till you haue made vp your Stacke, in such proportion as you shall thinke conuenient; and this will keepe all kind of Corne, or Graine, or other seeds, sound, sweet, and fit for any purpose, at least a dozen yeare, or more, as some haue supposed, without either too much drying, withering, moistening or molding; and sure this is a very excellent way for the storing vp of much Corne in a very little roome, and may as well be done with corne as with strawe: onely it is not to be done in Barne nor House, because Mice, Rats and other kinde of Vermine will worke much destruction therevpon, but on a Stacke or Hovell made and proportioned in such form as was shewed before in the sixteenth Chapter, and so it will stand safe without all annoyance, as long as it shall please the owner to keepe it; sure I am it will last thus fully twelue yeares, yet some Authors affirme it will last fiftie yeares, but that is a space of yeares beyond my tryall.

Touching the keeping of Corne after it is thrasht and drest, it is diuers wayes to be done, as by storage or place of leare, as garners, hutches, and such like: by labour and industry, as with the shonell: or else by device or medicine.

Keeping of
corne out of
the Eare or
drest.

For Garners, they be made diuers wayes, according to the nature of the Country and custome of the people.

Of Garners.

Some are made with clay and lome troden with haire, straw chopt, and such like: but these are the worst and doe soonest corrupt Corne, for although they are warme, which is a great preservation to Corne, yet they yeeld dust, and from that dust is bred fleas, mytes, weaues, and other vermine which spoile corne, and make it easily rot.

Others are made of stone and lyme, but they are subiect
against

against wet weather, to yeeld forth a moist dew which corrupteth and rotteth corne.

Others are made of Bricke and Lyme, and they are very good against the weauell and other small Vermin, but the lyme is sharpe and so consequently very vnwholesome for all manner of Graine. The best Garner then that can bee made to keepe all manner of graine in, is made of plaster, burnt and brought into mortar, and so raising it vp with the helpe of small stones hidden and placed in the middest of the wall, to make both the inside, and the outside of the Garner of smooth plaster, no stone being seene but hidden at least two fingers thicke on each side, and all the bottome also must bee made of plaster; for no floore keepeth corne so well, of what kinde so euer it be, and these Garners would be placed as neare as you can to the backs or sides of chimneys, or as neare the ayre of the fire as you can conveniently, for as there is nothing more cold then plaster, yet is it euer so dry and free from moysture, that with no change of the ayre or weather it relenteth, but keepeth the corne euer in one state of goodnesse, whilst the warme standing thereof is such a comfort in the Winter, and the naturall coolnesse of the thing so soueraigne in Sommer, that the graine euer abideth in one state without alteration.

Of hutches.

Now for hutches or great chests, byngs, dry-fats, and such like, they are made of old dry and wel-seasoned oake-boards, plained smooth, and close ioyned and glewed together, with couers & lids made also very close, whereby little or no ayre can come in: Some of these great byngs or hutches made of dry boards are made open and without couers, but they are not so good, for the ayre cooling the vpper part of the corne, & the middle part sweating,

ting, breedeth corruption, or mustinesse, which hurteth and spoileth the corne: besides, they are somewhat too warme, and thereby make any greene corn apt to corrupt and finell.

Touching the vse of Garners and Hutches, they are principally to keep malt after it is dried, or Barley which is for the vse of bread or meale: and here is to bee noted that the best manner of keeping malt, is to keepe it in the come, that is to say, in the dust and other filth which cometh with it from the kilne, as thus, when first you lay your malt on the kilne to bee dried, you know there is at one end a certain sprout or smal threds which growes from the corne, & is called the come, which by the rubbing and drying of the malt falls away, and leaues the corne cleane and snug of it selfe, and when you trim & dresse vp your malt for the mill, is winnowed & cleansed away: this you shall preserue & put all together into your garner or hutch, which will so mellow & ripen your malt, that in the spending thereof a pecke will goe further then a pecke and a halfe kept of a contrary fashion, & although some are perswaded that this come or malt dust, is a great breeder of the worme or weuell, by reason of the much heat thereof, being indeed of the purest of the hart of the corne; yet it is not so vnlesse some dankenesse or moisture doe get to the corne, and then it breeds weuels in infinite abundance, and therefore by all meanes bee sure that your garners and hutches doe stand exceeding dry, and then there is no feare of the losse of corne, nor shall you need to dresse or winnow your malt but as you spend it.

Lastly, here is to be noted, that although I here ioyned garners, hutches, chests and byngs together, yet I make them not all of equall goodnes: for the plaster garner is absolutely the best of all, the close hutch or chest next, and

the open bin last; yet any or all sufficient enough to keep malt, barley, or small seeds, diuers yeares without imperfection.

It is written by some of the ancientest Authors that wheat hath beene kept in these close hutches or chests sweet, the space of fiftie yeares, yet I hold the rule somewhat doubtfull, both because wheat of it selfe lying so close packt together, is apt to heat and sweat, and that heat commonly turneth to faughtinesse, and the sweat to corruption; but that it may thus be preserved frō worms, weauels, mytes and other vermine, breeding in corne, it is doubtlesse and infallible.

To preserve
Wheat.

Now for the preservation of wheat, which is the most principall graine, of greatest vse, and greatest price, and therewithal most tender, and aptest to take hurt: the experiments are diuers as mens fancies & practices haue found out, for some husbandmen hold opinion, especially the French and Spanish, that if you take the lees of common oyle (so it be sweet) and sprinkle it vpon your wheat as it lyes, either in the garner, or vpon the floore, that it will preserve it from all corruption and annoyance whatsoever, nor doth it saue wheat only, but all other manner of graine whatsoever; nor doth preserve corne alone from mischief, but if corne by casualtie be tainted or hurt, it doth recover it againe, and brings it to the first sweetnesse; and if either wormes or weauels be bred in it, the oyle presently kils them, and makes the corne free from that mischief: as for smaller seeds, as hempe, lyne and rape, this oyle doth not onely keepe them long and sound, but also feeds and nourishes them, and makes them better, either for the ground, or for vse either in the mill or in medicine. There be others that vse to take chalke, and beat it to powder, and then scatter it amongst their wheat,

wheat, when they put it into the garner, & haue found that thereby their graine hath beene wonderfully preserved from all imperfection, and surely there is great reason for the same, because the driness of the chalke drinketh vp the moisture which sweateth from the graine, and is the first breeder of all putrifaction: also it cooleth and asswageth the immoderate heat which is ingendred in the corn by reason of the packe and close lying together. Againe, there bee others which vse to lay great store of wormewood amongst their wheat, which likewise preserveth it from all annoyances, especially from worms and weauels, as also from Mice, Rats, and such deuouring vermine; neither will the Corne corrupt or grow faughty, as long as the wormewood remaines amongst it: in Italy the carefull Husbands vse to take a certaine dry earth or clay, called earth of *Olnithus* or *Cernithus*, and this earth they beat amongst their wheat, and then put it into the garner or hutch, and it will keepe it sound and sweet diuers yeares together; then when they haue occasion to vse it, with small reeing siues to dresse it from the Corne, and so preserve the dust, which will last and serue you many yeares together, euen almost an age as some have reported, and is at this day to be scene in many parts of Italy and other places.

Againe, I haue for mine owne part scene in the Ilands of the Azores, certaine very great and large caues or pits made vnder the earth, of the fashion of a Spanish earthen Iarre, that is to say, great and spacious in the midst and narrow both at the top and bottome, like a brasse pot or great glasse vyall, and made as smooth within as may be, and in these caues or pits, they first lay chaffe, and then their thrasht wheat filling it vp full to the top, or within a handfull thereof, which they fill againe with chaffe,

and then closing the top with a broad stone, they couer it ouer with earth so close and vnperceivable, that you may walke or trauell ouer it without any suspection; and for mine owne part, I haue my selfe digged vp many of these pits, and found great store of wheat, both in the high- wayes, and other most insuspicious places, and surely it is thought, and experience in those places makes it good, that in these caues or pits you may keepe wheat as long if you please as *Pliny* speaketh of, which is an hundred or an hundred and twenty yeares without hurt or putrifaction either of heat, moisture, wormes, weaues or any other vermine whatsoever which consumeth or deuoureth Corne; yet how I may recommend this experiment to our nation I am vncertaine, because the much moisture of our climate, and the cold rawnesse thereof promiseth a contrarie effect; for the great enemies vnto graine, are violent cold and moisture, and with vs it is very difficult to make any cauerns vnder the earth but they must bee subiect vnto both: therefore onely to those which liue in hot sandie countreys high and free from springs or waters, or in dry and rockie grounds, where these mynes or hollow places may be hewed out, as in a maine and firme quarry, I recommend the tryall of this practice, with this assurance, that where the ground is fit for this purpose, as in any of your sandgrounds or grauelly earths, as in Norfolke, Middlesex, Kent, and many other sandie climats; or in rockie situations as in Nottingham, Bathe, Bristol, and such like, you may keepe your wheat, good, sound, firme and free from all annoyances, euen as long as you shall please to keep it, both without putrifaction in it selfe, or waste made by other deuouring worms and vermine: but if in a more moist place, as in a clay or other mixt earth

which

which euer is vomiting wet and dewish humours, you are forced to approue this experiment: then you must necessarily lime all your caue or hollow myne within, at least halfe a foot thicke with tyle shred and plaster laid wall-like together, and then the plaster dawbd at least three fingers thicke aboue all, and so you may keepe your Corne as safe and as sound as in any hot soile whatloener, but without it your corne will not endure a weeke without rottenness, faughtiness, mouldiness, and stinking.

To conclude, hauing shewed you all the most approued and best experiments for the keeping and preserving of Wheat, there is not any better, or so good as this poore silly plaine one which I will here deliuer: And that is, first (as neare as you can) reape your Wheat at the Change of the Moone, for Wheat which is so reaped is seldome or neuer subiect to losse or putrifaction (being gotten dry, and in husbandly manner ordered and handled) because that celestial body hath such a power and influence in the growth of Corne and seeds, that as shee groweth so they grow, and as she waneth, so they abate and wither. And truly for mine owne part, in my poore husbandry, I haue made this obseruation, that I haue reaped corne at the beginning of the wane (to mine eye and iudgement) great, full, and bold (as the Plow-man calls it) and within few daies after, when it came to thrashing, I haue found it most poore, hungry, and small corne: nor could I giue or find any other reason for the same, but that it was reaped in an ill and most vnseasonable time: for on the contrary part, I haue euer found that corne reaped vpon the Change, being ripe, full, and every way fit for the barne (and the weather faire and dry aboue-head) it hath neuer altered, but kept his first and perfit goodnesse, so that I cannot chuse but in this case thinke the obseruation of

the Moone to be a thing of great effect and validitie, appointed by God as a second meanes for our help and profit: when therefore you corne is thus seasonably and well got, you shall thrash it, winnow it, and dresse it so cleane as you can, then carry it vp into your chambers, or lofts appointed for that purpose, and whose floores by all meanes I would wish to bee cast of the best plaster; for boards are too hot, and clay is too apt to breed vermine: On this plaster floore you shall spread your wheat, not about a foot thicke at the vttermost, and so let it lie: observing once in foure or in five daies at the most, with a large wooden shouell, to turne the Wheat quite ouer and ouer. And thus doing you shall be sure to keepe it as sweet sound and good, as when it first came into the barne: for neyther can the heat, sweat nor coldnesse offend it, the first being cooled and tempered by the opening and dispersing; the second dried vp by the ayre which hath free recourse into it, and the last comforted by the labour and tossing of the shouell, casting it vp and downe from one place to another; and though some curious Husbands may object that this manner of keeping corne dryeth it somewhat too much, and thereby disableth it for some particular purposes, as for seed, and such like; yet in that they are much mistaken; for this stirring and mouing of Graine, is not a drying of it, but rather a great comforter and strengthner of it, dispersing backe into the Corne, those wholesome vapours which should doe it good (by way of communication and fellowship with the Graine) and expelling those ill humours which sweating out of it would otherwise confound and hurt it, so that in conclusion for the true and long keeping of wheat sweet, sound, and perfit, without losse or corruption, there is no way more safe or easie, then this last expressed, being

of all other the best, although in shew it appeare sleight and triuiall, as for the most part things of greatest moment in this nature doe; but to the iudicious Husbandman I referre it, whole aime is at the worth and substance, not at the words & curious glosse, set forth in strange ingredients. Touching the keeping of Rie or Masline, or as some cal it munck-corn or blend-corn, being part Rie, & part wheat mixed together, that which preserveth wheat will also preserve it, for they are Graine of like nature, onely the Rye is somewhat hotter and dryer, and therefore will endure somewhat more moisture; yet to speake particularly touching the preservation of Rie, there is nothing better then the Plaster floore, and oft turning; the close Hutch is also exceeding good, so is the Pipe or Dryfatte, but being once opened, and the ayre entring into the Corne, except it be soone spent, it will soone putrifie, for though in the close keeping it last long, yet when it comes to the ayre it quickly receiues taint. Lastly, for the profit in keeping of Rye, indeed there is nothing better then to ply it and tread it hard into dry vessels or barrells, wherein salt hath beene much ledged, or other brine or salt matter: provided alwayes that the vessels be sweet and vntainted, no wayes subiect to faughtinesse, or other vsfauorie smells, from which there is no preservation.

To preserve
Rye.

Concerning the preservation and keeping of Beanes, which are indeed a more grosse and fatter graine then any heretofore written of, and out of the fulnesse of their substance, more subiect to moisture & those dankish humors which corrupt Corne: the carefull husbandman obserueth two rules; first, not to thrash any Beanes or Pulse, more then for necessarie vse (as for the Stable or Mill) before it bee midde March, at which time the Graine hauing

To preserve
Beanes.

having taken a kindly sweat in the Mow, Stacke, or Houell, is become so dry, firme, and solid, that no floore, wall, or other place of leare, can make it relent or giue againe, (except great abuse and too moist-keeping :) for it is to be vnderstood, that this sort of Pulse or Graine is of it selfe so exceeding moist and apt to sweat in the mow, that all Husbandmen endeauor by no meanes to house it, or lay it within doores, but seeke to make it vp in Stackes and Houels without doores ; not so much that house-roume is wanting, as that the benefit of the Sunne and Ayre which pierceth through the same, dryeth and ripeneth the corne in such kindly manner, as maketh it as seruiceable as any other : and indeed, the first inuention of Stackes, Houels, Reekes, and such like, did not spring so much from the want of housing, as from the good and profit which the Husbandman found to acruce to this kind of Graine onely by reason of laying it abroad ; for it is certaine, that Beanes and Pease neither grow together, nor ripen together, but put forth their encrease one after another ; for you shall see vpon one Stalke, bloomes, swads, and ripe cods : so likewise in the gathering of Pulse (when it is reaped from the ground) you shall see some dry & withered, some ripe, some halfe ripe, some absolutely greene, and as but new in growing.

Now all these must be reapt together, and if you stay them in the Field till all be of like drynesse, questionlesse the oldest wil shake and shed vpon the ground before the youngest be ripened, and what that losse will redound to, euery Husbandman can iudge ; so also to house and mow vp in close mow, the dry pulse with the greene, surely the greene cannot chuse but inflame and heat the dry, and the dry so heated, giue fire to the greene till both be either rotted or consumed : and hence it came,

that expert husbandmen deuised to lay their pulse for the most part euer without doores in stackes, reekes, and houels, that the Sunne and wind passing thorow them might bring all the graine to an equall drinesse and hardnesse.

Againe, Pulse being of all Graine the coursest and fullest of substance in it selfe, and the straw euer big and substantiall, and full of broad thicke leaues euer moist and sappie; it must needs follow that this Graine must euer be most apt to sweat in the mow, and so necessarily craueth the greatestt store of ayre, and the longest time in drying; so that to returne to my first purpose, it must needs follow, that no Beanes or Pease can be fully ripe or seasoned in the mow, till it bee mid March at the least; for it is an old saying amongst the best husbands, *That March wind is a salt which seasoneth all Pulse*: And if vse or necessity compell men to thrash their Pulse before that time, the graine is so imperfect, that of force it must bee kilne dried, or els it is fit neither for the vse of bread nor prouender.

Now herein is to be vnderstood that Pease or Beanes which are kilne dried, may bee kept sound, sweet, and good, either on plaster floores, boarded floores, or earthy floores, the space of many yeares without turning or tossing; nor need you to respect how thicke the heape lye, since Beanes after they are once dried on the kilne, or in the Sunne, neuer after will thawe, giue againe, or relent, but remaine in their first soundnesse. But if you preserve you Beanes for other vses, as to boyle in your pot, and feed your seruants withall, as is vsed in Somersetshire, and many other Westerly parts of this Kingdome, then it shall bee good for you to take oyle barrels, oyle caske that is sweet, and first chalke them all ouer within and without with ashes, and then put your Beanes therein, and close

vp the heads, and as it is affirmed by diuers great Authors of Husbandrie, it will keepe Beanes sound, sweet, and good, twentie yeares : nay, some giue instances of Beanes which haue beene thus kept and presued the space of one hundred and twentie yeares; and surely I am perswaded, that if Beanes bee well and dry got, and thrasht at a seasonable time of the yeare, as in March or Aprill, that then thus kept, they will last the vttermost of a mans pleasure.

Preseruing
of Pease or
Fetches.

Now for the keeping and preserving of Pease or Fetches, which of all other Graine whatsoeuer, is most subiect to rottenesse and imperfection, because out of it owne nature it is apt to breed wormes, weauils, and mytes, by reason of the much luscious sweetnesse of the kernell of the Graine; you shall in all things obserue the same courses that you do with you Beanes, both touching your gathering, drying, stacking, and also thrashing, for as they are most aptest to grow together being neere of nature and condition one to the other, so it is fit that vnto them you do applie one and the selfe-same medicine or remedie.

And herein is to be noted, that as Pease are of more generall vse then Beanes, as for Horse-prouender, feeding of Swine, Pigeons, Pullen, and such like; as also for bread, pottage, to boyle with or without meate, for certainly it is a most wholesome and strong food as may bee seene by the people of Deuon-shire, Cornwall, and Somerset-shire, to whose great strength of bodie not any reason can bee giuen more probably then their much feeding on this Graine, and their acquaintance with much and strong labour, so they ought with more care and circumspection to bee presued from all those annoyances that naturally are apt to hurt them,

as wormes, rottenesse, mould, mustinesse, and such like.

And first, there is nothing better for the long and well keeping of Pease, then the very well drying of them, eyther in the Sunne or on the kilne, especially those which you vse for bread, prouender, or feeding of Swine: and although some Husbands vse to feede Swine with vndryed Pease, nay many times both vndryed and vndrest, that is to say, the Pulse or Chaffe not taken away, and are of opinion, that the Graine so giuen, sooner feedeth and puffeth vp Swine then the other, yet they are deceiued; for albeit it swell and puffe vp a beast, yet is the flesh and fatte neither so good, sound, and long lasting, as that which is gotten with drie foode, nor doth it make a Swine so thirsty, and the Husbandman as euer assured that when his Swine drinks not well, he feeds not well; therefore what Pease you keepe for bread or feeding of Cattell, by all meanes dry them well, and lay them either in Garners or Floores, and they will last sound and good without breeding worms or weuills, as long time as you please. But those which you keepe for foode at your owne table, as in pottage, or other vses, which must by no meanes bee too much dried, because then they aske a double time in boiling, and spend a double quantity of fuell in their preparing. Some vse after they bee cleane thrasht and drest, to lay them in a coole close Garner, either of Plaster, Earth, or Boards, of which, Plaster is the best; as for any thing that relenteth or yeeldeth moysture, as Lime, stone walles, or such like, it is most hurtfull, and immediatly maketh Pease mould and rot; also it is good to lay your Pease in thicke heapes in your garner, for that will preserve them moyst the longest time, but to spread them thin vpon the floore, by which meanes

the Sunne, Ayre, and Winde may passe thorow them, is not so good, for it drieth them too sore, and taketh from them much of their sweetnesse and goodnesse, which ought most carefully to bee preserved. There be others which preserve these tender meat Pease by thrashing them vp, and then letting them lye in their owne pulse or chaffe, and not dressing them but as they haue occasion to vse them, and questionlesse this is a very good and laudable way, for the pulse or chaffe doth maintaine them sweet and moist, and yet keepeth them withall so warme and comfortable, that they last much longer then any other way whatsoeuer, and in this manner of preserving Pease is to be noted, that by all meanes you must let them lie vpon a dry earth floore, so long as they are in the chaffe, rather then on the boards, or on plaister, and yet in this case the boards are better then plaister.

Lastly, and which indeed is the best experiment of all other, if you intend to keepe Pease any extraordinarie long time, you shall take Barrells or drie Caske, well and strongly bound, and pitch them within exceeding well, with the best pitch or bitumen that you can get, and then sprinkle the pitch all ouer with strong vinegar, then take your Pease, being cleane and well drest, and put them into the Barrells, pressing them downe close and hard, then head vp the Barrells, and let them stand drie and coole, and they will preserve your Pease sound, sweet, and good for any vse whatsoeuer as long as you please, be it for ten, twentie, or thirtie yeares, according to the opinions of auncient Husbandmen, and other prouant Masters that haue lived and commaunded in townes besieged, and townes of Garison; neither shall any worme, mite, or weauell, euer breed in it, or offend it, nay if any haue in former
time

time beene bred in them, this manner of keeping the Graine, killeth them, and destroyeth them for euer.

Now there is another sort of Pulse which are called *Preferuing of Lentils or Lupins.* Lentils or Lupins, which albeit they are not so generally vsed for the food or sustenance of man, yet they are for horse, swine, and other cattell as much in request as any Graine whatsoever, and indeed doe feed fatter and sooner then other ordinarie Pulse, and the flesh so fed is sweeter and pleasanter both to the eye and to the taste, then that which is fed with Beanes or Pease; also they are a Pulse very Physicall and good for many medicines, as may appeare by the workes of many learned Physitians; and these the longer they are kept, the better they are, and fuller of profit. To preferue them then in good and sound estate, it is meete to reape them in very faire weather, and to Stacke them vp exceeding dry, and if they be laid in the Barne, or any close house, it is not amisse, for they will endure housing better then any other Pulse, yet the sooner you beat them out of the straw, or thrash them vp, the better it is, for husbandmen suppose there is no greater hurt to this kind of Graine, then the long keeping it in the straw; for it is of such rankenesse, that the very straw and cods breede in it much putrifaction; and I my selfe obserued both in Spaine, and in the neighbour Islands, where is great abundance of this kinde of Graine, that they doe no sooner gather it and bring it home, but immediatly they thrash it; nay, some thrash it in the fields vpon the lands where it growes, and so bring it home, then spread it on faire boarded floores in very great heapes, or els lay it vp in close hutches, or bings, such as Wheate and other white graine is to be kept in. If you drie this kind of Pulse in the Sun, or vp-

on a kilne, with a very moderate and soft fire, and then lay it vp either in close garner, or close hutch, it will last many yeares sound, good, and without corruption; there be other Husband-men which mixe with this graine when it is thrasht, a halfe part of hot, dry, white sand, or at least couer the whole heape of Pulse with the sand, and do find that it keepes the graine very sound and good many yeares together. But to conclude, if you take strong vinegar, and a good quantity of *Lacerpitium*, and dissolue and mixe them very well together, and then hauing laid your lentils or lupins together on a faire boarded floore, in large, broad and flat heapes, about two foote, or two foot and a halfe thicke with the vinegar and *Lacerpitium* sprinkle ouer all the heape, and not any change of weather, frosts, wormes or other vermine shall doe them hurt, but they shall remaine sound and good as many yeares as you please to keepe them. There are other husband-men that in stead of this before rehearsed, take onely sweete oyle, and sprinkle it all ouer the graine, and find the same vertue and effect, for neither wormes nor other vermine, will touch it, nor will the radicall humour thereof at any time waste or decay, but remaine strong, full and sound without any kind of diminishing, nor shall you find any abatement of it, or shrinking in the measure, but that which was a bushell, this yeare will bee also a bushell the next yeare, and as many yeares after as you please; which is no small profit to the owner: whereas on the contrary part if the graine bee either dried in the Sun, on the kilne, or by the wind, you shall hardly haue of euery such bushell so dried, three pecks and a halfe againe, which is by computation at euery quarter which is eight bushels, full one bushell lost, and yet this Pulse thus preserued as before said, shall bee as good for any
vfe

vse whatsoeuer fit for such Corne to be imployed in, as any other dried graine whatsoeuer, & yeeld as much euery way, and altogether as good meale, and as good meate.

Now touching the preserving and keeping of Oats, it is to bee vnderstood that of all Graine it is least casuall, because of it selfe naturally it breedeth no euill vermine, and is againe preserved and defended with a double husk, whereby neither cold, moysture, heate, nor drinesse is able so soone to pierce and hurt it as other graines which are more thinne clad and tender, yet because it is of great and necessary vse both for cattell and pullen, and that neither the Husband nor Houswife can well keepe house without it, you shall know that the best way to preserve it longest, is, after it is thrasht to dry it well either in the Sunne or on the kilne, and then either put it into close Garner or close caske, and it will keepe many years sound and sweet.

Preseruing
of oates.

Touching the preserving of Oate-meale, which is the inner kinnell of the Oates, and a graine of most special vse in the husband-mans house, as in his pottage, in his puddings, and in many other meats necessarily vsed for the labouring man; It is an experiment not altogether so curious as any of the rest formerly written of, for no Oatmeale can be made, but the Oats must be exceedingly well kilned, or else the kinnell will not part from the hull, and being dried, as is fit, that drying is sufficient to keepe and preserve the Oatmeale diuers yeares: provided euer that presently after the making of your oatmeale, you put it into dry close caske or dry close garner (but caske is the better) and so as it may remaine exceeding dry (for any thaw or moisture corrupts it) & as neare as you can let it haue, if it be possible, some ayre of the fire, for the warmer it stands, the better and longer it will last as experience sheweth.

Preseruing
of oatmeale.

For

Preseruing
of any meale.

For the preseruing or long keeping of any sort of meale, there is no better way then first to boulte and searse him from his bran, for the branne is very apt to corrode and putrifie the meale, and to bring it to a faughtinesse or mustinesse, then into very sweet and cleane dry caske crosse and well bound, treade in your meale so hard as you can possible tread it, and then head it vp close, and so you may keepe it either by land or water as long as you please, and when you haue any occasion to spend of it, be sure to loosē no more of the meale then you presently vse, for the faster and closser the meale lyeth together, the longer and sweeter it will last, for it is the gathering in of the aire that onely corrupts it.

And here is also to be noted, that you should not presently assoone as your meale is ground, boulte it from the bran, but rather let it lie a weeke or fortnight, in the bran in some crosse bing or trough, and then after that time boulte or searse it, and you shall finde it to afford you in euery bushell, more meale by at least halfe a pecke then if you should boulte it presently assoone as it comes from the myll, whence it procedes, that the cunning and skilfull Baker will euer haue a weeke or fortnights prouision of meale before hand, which lying so long in the branne, paies double interest for the continuance.

Now if it fall out so, that either by trade of Merchandise, or other occasion, you buy any meale by way of transportation which is caskt vp (as much meale is sould by the barrell) you shall then presently as soone as you haue bought it (if it bee for your owne vse or expence) breake open the heads and empty the meale vpon faire sheets on a cleane floore, and then spreading it abroad, let the Sunne and Aire passe thorow it which will dry vp the sweat, and if there bee any taint or faughtinesse, take it away,

away, and bring the meale to his first sweetnesse, and then immediately boulte out the course branne, and after as was before declared, tread it hard into fresh and sweet caske: and thus you may keepe your prouision of meale all the yeare long; nay, if need require two or three yeares, for after the first sweat is taken away and kindly dried, there is no doubt to be made of any that shall follow after.

Lastly, touching the preseruing and keeping of all manner of small seeds of what nature or qualitie soeuer they be, whether hempe, line, rape, mustard-seed, or any other garden-seed whatsoeuer, though truly and properly they last neuer about one yeare, nor are fit for seed or increase after that date expired, yet in as much as they are medicinable after, and a much longer time, therefore you shall vnderstand that the best way to keepe them safe and sound, and the fittest for vse and profit, is first to gather them as soone as you perceiue them to bee ripe, and the weather being bright, cleare and dry, then shall you dry or wither them in the shade and not in the Sunne, especially vpon a plasterd-floore, where the light looketh to the South, and be sure that as little Sunne and moisture come to them as you can, for both are maine enemies; which done, bind them vp in bundles without thrashing, and so hang them vp and keepe them in their owne cods, and they will last for all vses, a full yeare, and for some particular vses two or three yeares; and in this manner you may also preserue all manner of hearbs, weedes, flowers, roots, and the barkes or rinds of all manner of trees.

Preseruing
of all small
seeds.

CHAP. XIX.

How to keepe Graine, either for transportation by Sea, or for use in a towne of Warre or Garrison, from one yeare, to one hundred and twenty.

The vse of
Graine,
Pulse at Sea.



Of Rice, and
the vse.

Of speake of the Graines and Pulses which are meetest for the sea, and their severall vses. It is to be vnderstood that the best and principallest Graine which is indeede both most sweete, most fresh, most pleasant in taste, and most long lasting, is Rice, which although it grow not much in our kingdome, but that wee are beholden to our good neighbours for the trade thereof, yet it is in such plenty, where we fetch it, that wee neede neither complaine of the scarcity nor the cost, and so much the rather in that a pecke thereof will goe further then a bushell of any other Graine; of this Ryce is made many good and wholesome dishes, some thicke, some thinne, some baked, some boyld, as thus: if you take a quarter of a pound of Ryce, and boyle it in a pottle of water, till it come vnto an indifferent thicknesse, and then put into it a good lumpe of ported or barrellled butter, and as much suger as shall sakt-wise season it to an indifferent sweetnes, it is a dish of meat, meet for an Emperour at Sea, wholesome, good, and light of disiesture, and wil bee as much as foure reasonable men can well eate at a meale; for the nature of the Rice it such that it will swell in boyling and grow to that bignesse, that in an instant it will thicken a pottle; some vse the night before they boyle it, to steepe it in so much water as will onely couer the Rice all ouer, and then the next day boyle it

in a pottle of water more, and the Rice so steeped will swell, that all the first water will be drunke vp, and a great deale of lesse boyling will serue to make it ready, and sure then this a man cannot finde a cheaper way to feed men, since one pint of water and the fourth part of a quarter of a pound of Rice (which comes not to aboue a halfe peny at the dearest reckoning) is a meale sufficient for a mans eating, hauing bisket and drinke proportionably. And this dish of meate being but thus thinne boyled, is called at Sea Lob-lolly, and after salt-feeding is wondrous wholesome and comfortable to any man, whether he be sicke, sound, or diseased, and both abateth infirmities and hastneth the healing of all wounds. There bee others that after they haue steeped this Rice (as afore said) doe then boyle it in like manner, till it bee so thicke that a spoone may stand vpright in it, and no liquidnesse of the water perceiued, then put a good lumpe of butter into it, and boyle it with it, and stirre it about, and it will make it come most cleane out of the pot in which it is boyled; then season it with suger and a little Cynamon and it will be a dish of meat, right good and delicate, and meete for any man of what quality soeuer, that is worth goodnesse or preseruing, nor need the quantity exceed the proportion already described. Againe, if you haue meale in the Ship, if you take of this Rice steeped in water, and a little lightly boyled and seasoned with Suger, Cinamon, and Ginger, and a good quantity of butter, and then bake it in little Pasties, you shall find it a most delicat, pleasant, and wholesome meat, and that a penny in it shall goe further and giue better contentment then foure penniworth of Beefe, Bacon, Fish, or any other hard sale meat; yet doe not wish any man on Shipboard to make this a continuall feeding dish, for it is both too pleasant
S 2 and

and too strong, and where euacuation of some humors are wanting, may breed inconuenience in strong bodies, but rather to vse it once a weeke as a physicall nourisher, or for the comfort of sicke and diseased men, whose stomacks are rane away, or els weakned; there may be also made of this Rice in time of necessity (being ground to a fine meale) an excellent good bread or ruske, which is pleasanter, sweeter, and much longer lasting then any made of Wheate, or any other graine whatsoeuer, besides many other feedes which would in this place shew but too much curiosity to repeate.

Wheate,
and the vse.

The next Graine vnto Rice which is of estimation and great seruice at the Sea, is Wheate, of which although there be diuers kinds, yet they are all alike for the seruing of this purpose; onely the large and thicke hould Wheate (being well dried) will last the longest, but the smaller and fine skinde Wheate, yeelds the purer flower, and makes the better meate. Now of this Wheate is to be made diuers dishes of meat, for some doe take it and bruse or beat it in a bag, till the vpper skin be beaten off, and then hauing drest and winnowed it, boyle it in cleane water till it burst, and grow as thicke as pap, then take it from the fire, and being hot, put into seuerall dishes of wood, or traies, so much in euery dish or tray as may serue foure men, and so let it coole; then giue it to the sicke or sound, as you shall be directed, and it is an excellent wholesome good meat either cold or els hot, and a little butter melted with it, or being againe boild in fresh water, and seasoned with salt and a little sugar, it makes an excellent grewell, or lob-lolly which is very soueraigne at Sea; also your parcht wheat is a very good food at Sea, and of much request and estimation, being sprinkled with a little salt, and of this food a little will serue a man at a time, by reason

reason that the much sweetnesse thereof soone filleth and cloyeth the stomacke, yet it is wondrous light of digestion, and breeds great strength, and much good blood, as we daily find by experience.

The next Graine vnto this which is to be recommended to the Sea (and which is indeed not any thing inferior to either of the other going before, both for strength and lasting) is Oatemeale, which by reason of the great drynesse, and drying therof, feeles little or no imperfection at the Sea, as being vnapt to sucke or draw in any of the ill or moist vapors thereof. Of this Oatemeale is made many good, fresh, and comfortable meats at Sea, as grewell, or lob-lolly, by boyling it in fresh water, and seasoning it with salt, and (if you haue it conueniently) sometimes with sugar and a few currants, and a little mace, which is meat of great strength and goodnesse, especially for such as are sicke and weake, for it is a great restorer of nature, and purger of the blood; also to steepe the whole grots of Oatemeale a night in water, and then draining them, and putting it into a bag, boyle it till the grots break, then putting it out of the bag, butter it with butter, and it is an excellent foode; also boyling Oatemeale in fresh water with barme, or the dregges and hinder ends of your Beere barrells, makes an excellent good pottage, and is of great vse in all the parts of the West Countrie, especially, where Marriners or Sea-men liue and are called by the name of drousson pottage. Also of Oatemeale is made that meate which is called in the West, Washbrew, and may bee made at the Sea at your pleasure, being a meate of that great account amongst Deuonshire and Cornish-men, that they will allow it no parallel; and for myne owne part I haue heard a most famous and well learned Physitian in those

Of Oatemeale and the vse.

parts allow it to bee a meate of singular great strength and goodnesse, and withall so light of digestion, that a man can very hardly surfeit vpon it at any time; and I am the rather induced to beleue the same, because I haue obserued and seene many of the labouring men of that Countrie to eate such an vnmeasurable quantity thereof, that in mine eye one mans supper would haue serued a whole familie.

But you will say, hunger and labour are such excellent sawces, that they will digest any thing. To that I answer, that I haue seene Gentlemen and Gentlewomen of that Countrie, of whom as much curiositie hath attended, as is lyable to the City, nay such as haue had sickenesse their best familiar, yet eate of this with great and sharpe appetite, and when health was most to be feared, then to boast of most soundnesse. This washbrew is to looke vpon like Painters size, or new made Ielly, being nothing but the very heart of the Oatemeale boyled and drained to that height and thicknesse, hauing neither hull nor bran in it, but the pure meale and water, and it is to be eaten either, with wine, strong beere, or ale, or with clarified honie, according to mens stomackes or abilities. Now this the eaters thereof affirme, that by no means it must be chewed, but rather swallowed by the spoonfulls whole, because chawing like a pill makes it tast vnpleasantly. There is againe another meat to be made of Oatemeale, which is called Gertbrew, and is somewhat more course, and lesse pleasant then washbrew, hauing both the branne and hulls in it, yet is accounted a food of a very good strength, and exceeding wholesome for mans bodie, and of my knowledge much vsed and much desired of all labouring persons that are acquainted with it: Many other foods there are to be made of Oatemeale,

meale, but these shall be at this time fully sufficient.

The next graine to this I account Barley, which may be euery way vsed like vnto wheat, either to make grewel, to be creyed, parcht, or boyled : and of Barly for this purpose of food, the best is French Barley, the next is Barley big, or beare Barley, and the worst are the spicke or battle-dore Barley, and our common English Barley.

Of Barley,
and the vse.

And as Barley or Wheate, so you may vse your Bucke and your Indian *Silligo*, for they are of like nature, only aske a longer time in their beating, steeping, and boyling, because they are naturally more hard, and more dry, by reason of the heate of the climat in which the best grow; and it is euer to be obserued for a rule, that the dryer you keep your Corne at Sea, the better it is, the sweeter, and longer lasting.

Bucke, or
the vse.

Now hauing shewed the vse of these lighter graines, I will come to Pulse, and shew their vse and benefit at the Sea, or in besieged townes : and of Pulse, I will first speak of Beanes as a principall food, wholesome and strong, and though not so fine and light of digestion as any of the former, yet exceeding hearty and sound, and a great breeder of good blood ; they are for the most part to be boyled whole, till such time as they appeare soft and tender, or begin to breake, and then drained from the water, are serued in traies, and well salted, and so eaten ; a pottle whereof is thought a full proportion for foure men : and of these Beanes ther are diuers kinds, as the common garden Beane, or French Beane, which is great, broad, and flat, and these are the best to boyle, either with meate, or by themselves, and aske the least labour, because their outer skin is most tender, and the inward substance most apt to be mollified and softned : they may also be boyled both when they are yong and Greene, and when they are old and

Of Pulse,
and first of
Beanes, the
vse.

The French
Beane.

The Kidney
Beane.

and dry, and the meat at both times is good and sauiory.

The next bean to these are the Kidney beane, which is flatter, and lesser, and neerer the proportion of a kidney then the French Beane is, and this is also a garden beane, and whilst it is yong & greene is to be eaten sallet wise after they are boyld, both the cod and beane together, and it is certaine a better sallet cannot be tasted; for the cod or husk is euery way as excellent in tast as the beane is; but after they grow old and dry, and that the moisture is gone out of the cod, then it is meete to thrash them, and then boyle them like the French beane, and they are euery way as good meate and as soone boyled and as tender.

Common
Field beanes
the vse.

The next Beane to these are your common and ordinary field beanes, which hauing tough and hard skins aske more boyling then the other beanes, and are somewhat harder in tast, yet a good sound foode also: there be many that partch them in the fire and thinke them then the best meate, because the fire sooner breakes the skin and softneth the kinnell; but they cannot be done so abundantly, and therefore are not so much in vse.

Of pease
and the vse.

After this great sort of Pulse, I will speake of the smaller sort, as Pease and their like: and of Pease there bee two kinds, the garden pease and the field pease, and for this vse (albeit both are good) yet the garden pease are best, for they are soonest boyled, are most tender, & serue for most vse, as for pottage, boyling, parching or spelting; and of these garden pease, there are diuers kinds; as white pease, French pease, hastings, rounsiuals, & such like; the first being the longest lasters, the second the pleasantest in taste, the third the earlyest and tenderest, and the last largest and fullest.

Seuerall sorts
of garden
pease.

The field Pease are onely of two kinds, as the white pease and the gray pease, and they seldome make pottage, because

because they are vnapt to breake, but are onely for boyling and making of leape Pease, or for parching, yet a good and a strong food also: and as we vse Pease, so in other Countries they vse Lupins, Lentils, Tares, Fetches, and such like smaller Pulse, but they are neither so good, wholesome, nor saourie in taste, being a kinde of graine more ranke, fulsome, and breeding of ill blood and infection within, these in cases of Sea-fare and War-fare ought principally to be eschewed & shunned.

Now it resteth after this long digression of these seuerall Graines, and their vses, with the meats and profits which are made for them, that we come to the safe manner of keeping and preserving them either by land or water, for victuall or transportation, so as they may last and indure without ill smell or rottennesse.

And first for transportation of Graine by Sea, it is two wayes to be done, as either in great quantities for trade and the victualling of other nations, or in smaller quantity for victualling the men in the ship, prepared for a long and tedious voyage.

To transport
Graine.

For the transporting of Graine for trade in great quantities, it is to bee intended the voyage is seldome long, but from neighbour to neighbour, and therefore commonly they make close decks in the ships to receiue the Graine, faire and eauen bordered, yet if such decks be matted and lined both vnder and on each side, it is much the better, and this matting would be strong and thinne; there be some which make the deckes onely of mats, and sure it is sweet, but not so strong as the board, therefore the best way of transportation is to haue strong boarded decks well matted, and then spreading the corne of a reasonable thicknesse, to couer it with matting againe, and then to lay corne on it againe, and then mats againe, that

Transporting
graine
for trade.

betweene euerie reasonable thickeſſe of Graine a mat may lye, the profit whereof is, that when the corne with his owne heat and the working of the Sea ſhall beginne to ſweat, which ſweat for want of ayre to dry it vp, would turne to putrifaction, then theſe mats thus lying between, will not onely exhale and ſucke vp the ſweat, but alſo keepe the Corne ſo coole and dry, that no imperfection ſhall come vnto it : and here is to bee noted, that theſe mats ſhould rather be made of dry white bents, then of flags and bulruſh, for the bent is a firme, dry, criſpe thing, and will not relent or ſweat of it ſelfe, but the flag or bulruſh is a ſpongy and ſoft ſubſtance which is neuer empty of his owne and others moiſtures.

Transporting Graine for victuall.

Now for transporting of Graine for victuall for the ſhip, which is in much ſmaller quantity, becauſe it is but for the priuate uſe of few within the ſhip ; the onely beſt and ſafeſt way is to take Salt-fiſh barrells, or any caſke in which any Salt-fiſh hath beene piled, as Cod, Herrings, Salmon, Sprats, or any other powdred Fiſh ; and whiſt the veſſels are ſweet, you ſhall calke them both within and without with plaſter, daubing them all ouer ; then into them put your graine of what kind ſoeuer it bee, and head them vp cloſe, and then ſtow them in ſuch conuenient dry place of the ſhip as you ſhall thinke fit, and queſtionleſſe, if beleefe may be giuen to the wortheiſt Authors which haue writ in this kind, you may thus keepe your graine ſweet, ſound, and in full perfection from one yeare to an hundred and twenty yeares ; but certainly, daily experience ſhewes vs, that all kind of graine thus put vp and kept, will remain ſound and ſweet, three, foure, and as ſome ſay, ſeuen yeares, for ſo farre hath lately been tried : and what here I ſpeake of ſhip-board, the like may be done in any towne of Warre or Garriſon, whether beſieged

sieged or not besieged, or in any other place where any necessity shall compell; the prooffe of this manner of piling or putting vp of graine, serueth as well for Land as Sea.

CHAP. XX.

The enriching of all manner of barren Grounds, and to make it fruitfull to beare Hops.

THe Hop of all Plants is the most tender, and can endure neither too rich a ground, nor yet too poore, for being planted in the first, it bringeth forth onely leaues and no Bells, and in the latter it yeeldeth neither leaues nor Bells.

*Additions
the whole
Chapter.*

Now in the first sort of ground which is fertile and rich, I haue nothing to doe, but onely to aduise how you may allay and lessen that too much fatnesse, by mixing your hils well with Chalke or small sharpe Grauell, if it bee a hassell or mixt mould, and with good store of Red Sand if it be a stiffe Clay, for either of these mixtures will in short space abate any fertility.

*Abating of
fertility.*

But if the soile be contrary to this, that is, extreame barren, then you shall seeke by these meanes following to encrease the fertilitie: First, when you haue taken view of that barren earth, which you intend to conuert to a Hop-garden, you shall first looke to the situation thereof, whether it lye high or low, whether it be subiect to inundations or drownings, or that it lye safe and free from any such annoyance: if it bee subiect to great and deepe ouer-flowes, then it is no ground for this purpose: but if it be onely lyable but to some small washings, then you may by a few small draines and sewers cast through your allies, conuey away the water vnto some lower ground,

*Increasing
of fertilitie.*

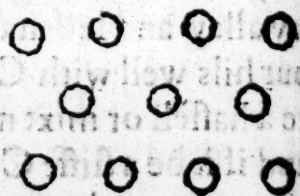
*Choice of
Earth.*

*Draining of
Waters.*

**Casting of
the hills and
allies.**

so as it may not continue long in the Gardens to do hurt. Besides, for a further safety to the Hopp, you shall make your hills a great deale bigger and higher, that when any ouer-flow shall happen, the water may not reach above the mid part of the hill at the most, for the root may endure moistning, but not drowning: and this water thus running through the allies, and not drowning the roots, will bring to the ground very much fertilitie. But howsoeuer after you haue easde your ground of these particular faults, yet the general fault which is barrennes will remain still: therefore hauing plotted out your Garden, and fenced it sufficiently about, you shall then cast vp your hills about Michaelmas, placing them in a very orderly manner, and making allies between them of foure or five foot bredth between hill and hill, so as a man may walk at pleasure through and about them, neyther shall these hills stand all directly one behind another, for so one will ouer-shadow another, which is an annoyance, but according to this Figure, where there is a largenesse of space, and a by-passage, through which the Sunne may come to giue comfort to euery plant. These hills if the ground be free from water may be raised about two foot, or a foot and a halfe high, & of a compasse answerable to the height, neither so little that the hill may be sharpe like a Sugar-loafe, nor yet so bigge, that the hill may lye flat, and so retaine and hold any raine, or wet, which shall fall vpon it; but you shall keep a due middle proportion, making the hill conuenient for your plants and poales, and so as it may shoot or put off any wet or other annoyance which shall fall vpon it.

Now these hills you shall not make entirely, all of the



one mould, but you shall take as it were a third part or better thereof; then another part of the earth which lyeth vnder dunghils, and the last part of Sope-ashes, and these three bodies you shall mixe equally together, and of them compound your Hop-hils. But if this seeme somewhat too difficult, and that you cannot finde enough for your purpose of either of these measures; then you may take three parts of the naturall earth, and but only a forth part of the other two, and thereof compound your hop-hils, and it will be sufficient to afford you profit enough; provided you be able once in three or foure yeares to renue it, for so long this will last in full strength and power.

The composition of enriching of Hills.

When you haue thus made vp your hils, you shall then pare vp with a paring shouell, all the greene swarth quite through all your alleys, at least foure fingers thicke, and with the Swarth so pared vp, you shall couer all your hils almost to the top, turning the greeneswarth next vnto the earth, so as it may rot, for that is an excellent measure also. Then when your alleys are all thus cleansed of their swarth, you shall take good store of Braken or Ferne, and strawe it all ouer quite through all the alleys, that it may lye a good thicknes, almost to the midst of the hils, which hauing all the winter to rot in, will not onely be an exceeding comfort to the hils, and preserue both them and their Plants from many euils, but also being shouelled vp together with the earth in the Spring time, will bee a marvellous strong measure wherewith to replenish the Hills, and to make them to prosper exceedingly, and to saue much other cost and charges, as well in measure as in cariage.

Preparing of the alleys.

When your hils are thus enriched, and your alleys thus prepared, you shall then open your hils in the tops, and set your plants, that is to say, in euery hill foure plants at the least, being well prepared, and this should be done in the

The planting of Hops.

moneth of October, and these plants must bee set good and deepe in the earth, and couered all ouer at the least foure fingers thicke; and if with the earth which covereth these plants, you mixe Oxe-blood and Lyme, it will not onely giue great comfort and nourishment to the plants, but also defend and saue the roots from wormes & other vermines, which otherwise would seeke to destroy them.

Pulling of
Hops.

After your garden is thus planted all ouer, you shall then let it rest till the following Spring, and about April finding the small twines of your Hops issued out of the hils, and running alongst the ground, you shal then set vp your poales, which poales so they bee long and straight may be of any wood you please, as either Ash, Elme, withy, willow, or Sallow, & in the setting vp of these poales you shal haue two very carefull respects: first, that in putting in of the poales, and fastning them within the earth, you doe not hurt the Hop Roots, which a small carelesnesse may doe, but be sure to set them cleare at the roots: and that you may doe it the better, and make your poales to stand the faster, it is good that you haue an iron Augur wherewith first to pearce the ground, and then to put the poale in after, and so run it in hard that it may not stir: the second care is that you place not one poale to ouer-shadow another, but that they may stand so cleere one from another, that which way so euer the Sunne shall cast his beames, yet euery plant (as it winds about the poale) may be an equall partaker of the same; this with a small obseruation in the setting vp of the poales, may easily bee performed. The number of poales that you shal set vpon euery hill, must bee answerable to the Syens which shall issue from the roots, allowing to euery poale two Syens at the least, and not aboue three at the most. These Syens (when your hils are poaled) you shall with their hands twine a-
| about

about their feuerall poales, and those which are but new peeping from the ground you shall so fould amongst the other branches, that they may of themselves run vp about the poale; & as these so also al the other twigs, which are any way deriued from the mayne Syen, leaning not any at all to runne vpon the ground, for that is altogether profitlesse, and to no vse.

For the weeding of this barren earth thus made into an Hop-garden, there is little care to be had: for first the soppashes wherewith the hils are measured, the ox-blood and the Lime, are such enemies to all manner of weeds, that they will not suffer any to grow where they abide: Next the Braken and Ferne which couereth the alleys is such a poisoner and smotherer of any thing that shall grow vnderneath it, that it will not suffer any weed to peepe or spring vp through it; yet if in any especiall place where neither of these defences come, it happen that any weeds doe grow, then you shall with your best care cut them away, or pull them vp, and so your garden shall remaine comely, pleasant and fruitfull to euery prospect.

Of weeding hops.

CHAP. XXI.

A generall computation of men, and cattels labours: what each may doe without hurt daily.



O speake generally of all husbandly workes where the countrey is tolerable without any extraordinarie difficultie, you shall vnderstand that a man may well in stiffe ground, plow an acre, or an acre and an halfe, and in light sand grounds two or three acres with one teame in a day, and he may plow and sow in stiffe ground two acres and a halfe each day, and in light ground foure at least with one Teame,

Plowing
and sowing.

Teame, and alwayes what he soweth, that he may harrow the same day also.

Mowing.

A man may well mowe of good and deepe loggy meadow, or of rough vneuen meadow, euery day one acre, mowing cleane and making a smooth board: of well standing and good smooth meadow an acre and a halfe each day: and of very thinne and short grasse, or vpland meadow two acres at the least euery day.

Also, he may mowe of Corne, as Barley and Oates, if it be thicke, loggy and beaten downe to the earth, making faire worke, and not cutting of the heads of the eares, and leauing the straw still growing, one acre and an halfe in a day: but if it be good, thicke and faire standing corne, then hee may two acres, or two acres and a halfe in a day: but if the corn be short and thin, then he may mowe three, and sometimes foure acres in a day, and not be ouer-laboured: Also of Beanes he may mowe as much, and of Pease mixt with Beanes, having a hooke to follow him, no lesse; for they are workes in this nature most easie and least troublesome.

Reaping.

One man with a binder may well reape an acre of Wheat, or Rye in a day, if it be principall good and well standing, but if laid or beaten downe with weather, then three roode is fully sufficient for a dayes labour; but if it be thin and vpriight standing, then he may reape and bind fise roods in a day: of small Pease, Fetches, and such like, a man may well reape two acres euery day.

Binding of
Barley and
Oates.

Now forasmuch as it is a custome in diuers countreys (and truely is exceeding profitable and worthy imitation) to sheafe and bind vp both Barly and Oates, as well as Wheat or Rye, and that it both saueth much Corne, and also makes it take a great deale lesse roome, and that this labour is to be done after the mowers, as the other was after

after the reapers by gathering the Barley or Oats vp with a sickle or hooke, as it lyes in the swath, and so binding it in sheaues, you shall vnderstand that one man in a day will binde as much as one mower can mowe ; and if the men be any thing skilfull in the labour, two binders will binde as much as three mowers can mowe.

For the gathering or inning of graine, no man can proportion the number of loads, or quantitie of ground shall daily be brought home, sith the iourneys are vncertaine, some going a quarter of a mile, some halfe a mile, & some a mile : therefore it is the Husband-mans best way, the first day to goe with his Teame himselte, and both to obserue the labour and distance of place, and by that to compute what may be done after without hurt to his cattle, and where he failes of any hope, there to take a strict account of the error ; for it is either ignorance or carelesnesse, which brings forth mischances, speaking of husbandry, as ouerthrowing the Teame, ouer-loading the Teame, breaking necessary instruments, or not respecting the wayes and passage, any of which may in a day hinder more then halfe the dayes labour.

Gathering
in of graine.

Againe, a man may in a day ditch and quick-set of a reasonable ditch foure foot broad, and three foot deep, a rod or a poll a day, allowing fixteene foot to the rod, and so of larger measure lesse ground, and of lesse ground larger measure, according to the sufficiency of the fence which you purpose to make.

Ditching.

A man also may hedge in a day, if the hedge bee good and substantiall, that is to say, five foot high, well bound, thicke stackt, and close layed, two rod in a day, and if the worke bee lower or thinner then double to much, according to the former proportion.

Hedging.

For this plashing of hedges, or making a quicke fence if

Plashing.

he do it workmanly, & that the quick growth be high and well growne; and then he lay it thicke, close, and strongly bound on the top, turning the quicke downward and inward, to plash a rod a day is as much as any man can well doe, but if yee plash it after the West countrey fashion, that is, onely cutting it downe, and laying it along close to the ground, seeking onely thickeesse, and not much guard or comelineesse, then hee may well plash a rod and a halfe in a day without trouble, and sure in this worke is great care and art to be vsed as well for the preservation of the quicke, as the goodnesse of the fence, being a thing of worth and validitie to euery husbandman.

Delving.

Again, a man may delue or digge, as for garden mould, hempe-yard, Flaxeyard, or for the setting of Corne, or leuelling of vneuen places, one rood in a day, and the ground so digged and delued, hee may rake dresse and leuell in the same day also, but if hee digge it deepe, and trench it, and measure it, as is meet; either for garden, orchard, or corne setting, then to delue halfe a rood in a day, is a very great proportion, because ordinarily to delue, as to receiue ordinarie seeds, requires but one spade graft in depth; but extraordinarily to delue, as for enriching and bettering of the ground, and to cleanse it from stones, weeds and other annoyances, will require two spade graft at the least.

Thrashing.

Lastly, a man may thrash if the corne be good & cleane, without some extraordinary abuse or pouerty in the graine, in one day foure bushels of Wheat or Rye, sixe bushels of Barly or Oats, and fiue bushels of Beanes or Pease, but the Pulse must then bee imagined to bee exceeding good, otherwise a man shall thrash lesse of it, then of any other kinde of graine, for as when it is well loaden, it yeeldeth plentifully, so when it is poore and lightly loden,

it yeeldeth little or nothing, and yet hath not one stroke lesse of the flaile, nor any labour saved more then belongs to the best Pulse whatsoeuer being euer at least three times turned, and foure times beaten ouer.

Having thus generally runne ouer (in a short computation) the labours of the husbandman, I will now as briefly as I can, goe ouer the particular dayes labours of a Farmer or Plowman, shewing the particular expence of euery houre in the day, from his first rising, till his going to bed, as thus for example: wee will suppose it to bee after Christmas, and about plow day (which is the first letting out of the plow) & at what time men either begin to fallow, or to break vp Pease earth which is to lye to bait, according to the custome of the countrey; at this time the Plowman shall rise before foure of the clocke in the morning, and after thanks given to God for his rest, and the successe of his labours, he shall goe into his stable, or beast house, and first he shall fodder his cattle, then cleanse the house, and make the booths cleane; rubbe downe the cattle, and cleanse their skinner from all filth, then hee shall curry his horses, rubbe them with cloathes and wispes, and make both them and the stable as cleane as may be, then hee shall water both his oxen and horses, and housing them againe, giue them more fodder, and to his horse by all meanes provender, as chaffe and dry Pease or Beanes, or Oat-huls, Pease or Beanes, or cleane Oates, or cleane garbadge (which is the hinder ends of any kinde of graine but Rye) with the straw chopt small amongst it) according as the abilitie of the Husbandman is.

The particular expence of a day.

¶ And whilst they are eating their meat, hee shall make readie his collars, hames, treates, halters, mullens, and plow-gears, seeing euery thing fit, and in his due place, and

to these labours I will also allow full two houres, that is, from foure of the clocke, till fixe, then shall he come in to breakfast, and to that I allow him halfe an houre, and then another halfe houre to the gearing and yoking of his cattle, so that at seuen of the clocke he may set forward to his labour, and then hee shall plow from seuen of the clocke in the morning, till betwixt two and three in the afternoone, then he shall vnyoake and bring home his cattell, and hauing rub'd them, drest them, & cleansed away all durt and filth, hee shall fodder them, and giue them meat, then shall the servants goe in to their dinner, which allowed halfe an houre, it will then bee towards foure of the clocke, at what time hee shall goe to his cattle againe, and rubbing them downe, and cleansing their stalles, giue them more fodder; which done, hee shall goe into the barnes, and provide and make ready fodder of all kinds for the next day, whether it be hay, straw, or blend-fodder, according to the abilitie of the Husbandman: this being done and caried into the stable, oxe house, or other conuenient place, he shall then goe water his cattle, and giue them more meat, and to his horse provender as before shewed: and by this time it will draw past fixe of the clocke, at what time he shall come in to supper, and after supper hee shall either by the fire side, mend shooes both for himselfe and their family, or beat and knocke hempe, or flaxe, or picke and stampe apples, or crabs for cider or verduice, or else grinde malt on the quernes, picke candle-rushes, or doe some husbandly office within doores till it be full eight a clocke: Then shall he take his Lanthorne and candle, and goe to his cattle; and hauing cleansed the stalles and planks, litter them downe, looke that they be safely ryed, and then fodder and giue them meat for all night, then giuing God thanks for

benefits receiued that day, let him and the whole household goe to their rest till the next morning.

Now it is to bee intended, that there may bee in the household more seruants then one; and so you will demand of me what the rest of the Seruants shall be employed in before and after the time of plowing: To this I answer, that they may either goe into the barne and thrash, fill or empty the malt fat, load or vnload the kilne, or any other good and necessarie worke that is about the yard, and after they come from plowing, some may goe into the barne and thrash, some hedge, ditch, stop gaps in broken fences, dig in the Orchard or Garden, or any other out work which is needfull to be done, and which about the husbandman is neuer wanting, especially one must haue a care euery night to look to the mending or sharpening of the Plow-irons, and the repairing of the Plow and Plow geares, if anie bee out of order, for to deferre them till the morrow, were the losse of a dayes worke, and an ill point of husbandry.

Now for the particular labours of Cattell, though it bee alreadie in clusiuely spoken of in that which is gone before, where I shew you how much a man may conueniently plow in a day with one Teame or draught of cattell, yet for further satisfaction, you shall vnderstand, that in your cattel there are many things to be obserued, as the kind, the number, and the soile they labour in, for the kind which are Oxen, Buls, or Horses, the best for the draught, are Oxen, and the reasons I haue shewed in my former workes, the next are Horses, and the worst Bulls, because they are most troublesome; the number fit for the plow is eight, sixe, or foure; for the Cart, five or foure; and for the Waine neuer vnder sixe, except in leading home of harvest, where loading easily, foure very

Particular
labours of
Cattell.

good Oxen are sufficient, for the soile if it bee of the toughest and deepest earth, eight beasts can doe no more but fallow or breake vp Pease earth, no nor fewer stirre, if the season grow hard and dry; for soyling, winter rigging, and seed furrow, six beasts may dispatch that labour: if the soile be mixt and hassell, then fixe may fallow and sow Pease, and foure doe euery other ordure: but if it bee light and easie sand, then foure is enow in euery season. For the quantity of their worke, an oxe-plow may not doe so much as a horse-plow, because they are not so swift, nor may be driuen out of their pace, being more apt to surfet then horses bee, so that for an oxe-plow to doe an Acre, and a horse-plow an Acre and a rood, or an Acre and an halfe in good Ground, is worke fully sufficient.

CHAP. XXII.

The applying of Husbandry to the severall Countries of this Kingdome, wherein is shewed the office and duty of the Carter or Plowman.



IT is to be vnderstood that Husbandry doth varie according to the nature and climats of Countries; not one rule observed in al places, but according as the earth, the ayre, the much or little heat, moisture or cold doth increase or diminish, so must the skilfull Husbandman alter his seasons, labours and instruments; for in stiffe Clayes, as are all the fruitfull Vales of this Kingdome (of which I haue named most part in a Chapter before) as also Huutingtonshire, Bedfordshire, Cambridgeshire, and many other of like nature, all manner of arable works

must be begun betimes in the yeare, and the plowes and instruments must be of large size and strong timber, and the labour great and painfull: so also in mixt soiles that are good and fruitfull, as Northamptonshire, Hartfordshire, most part of Kent, Essex, Barkshire, and Countries of like nature, all arable toyles would begin at later seasons, and the plowes and instruments would be of middle size and indifferent timbers, and the labour somewhat lesse then the other: but the light sandy grounds which haue also a certaine naturall fruitfulness in them, as in Norfolk, Suffolk, most part of Lincolnshire, Hampshire, Surry, and Countries of that nature, all arable toiles would begin at the latest seasons, and the plowes and instruments would be of the smallest and lightest size, and of the least timber, and the labour of all other is easiest.

Lastly, for the barren vnfruitfull earths (of which only I haue written in this Booke) as is Deuonshire, Cornwall, many parts of Wales, Darbshire, Lancashire, Cheshire, Yorkshire, and many other like or worse then they, the arable toiles would haue a fit season of the yeare, according to the temperatenesse of the yeare, which if it happen earely, then you must begin your labours at later seasons, and for your plow and instruments, they must not keepe any certaine proportion, but bee framed euer according vnto the ground, the stronger & stiffer ground hauing euer the strong and large plow with instruments of like kind, and the lighter earth, a plow and instruments of more easie substance; as for the labour, it must be such and no other then that which hath beene already declared in this booke.

And hence it comes that the office and dutie of euery The Carters
 skilfull plowman or carter, is first to looke to the nature office,
 of the earth, next to the seasons of the yeare, then to the
 customes

customes and fashions of the place wherein hee liueth; which customes although they be held as second natures amongst vs, and that the best reasons of the best workemen commonly are, that thus I doe because thus they doe; yet would I wish no man to binde himselfe more strictly to custome, then the discourse of reason shall bee his warrant, and as I would not haue him too preiudicate in his owne opinion, so I would not haue him too great a slaue to other mens traditions, but standing vpon the ground of reason made good by experience, I would euer haue him profit in his owne iudgement. Now the further office and duty of the Husbandman, is with great care and diligence to respect in what sort or fashion to plow his ground; for although I haue in the former chapters shewed how he shall lay his furrowes, what depth he shall plow them, and how hee shall bee able to raise and gaine the greatest store of mould, yet is there also another consideration to bee had, no lesse profitable to the husbandman then any of the former, and that is how to lay your lands best for your owne profit and ease, as also the ease of your Cattell, which shall draw wi hin your draught: as thus for instance: if your arable land shall lye against the side of any steepe hill (as for the most part all barren earths doe) if then you shall plow such land directly against the hill, beginning below, and so ascending straight vpright and so downe againe, and vp againe; this very labour & toiling against the hill will breed such a bitter wearisomnesse to the cattell, and such a discouragement, that you shall not be able to compasse one half part of your labour; besides, the danger of ouer-heating and surfetting of your Beasts, whence will spring many mortall diseases: Therefore when you shall plow any such ground, be sure euer to plow it side-wayses over-thwart

thwart the hill, where your beasts may euer tread on the leuell ground, and neuer directly vp and downe, so shall the compasse & meaneure which you lay vpon the ground not bee so soone washt away from the vpper part of the ground, because the furrowes not lying straight downe in an eauen and direct descent, but turned crosse-wise vward against the hil, it must necessarily hold the soile within it, and not let it wash away.

Againe, it is the office of euerie good Plow-man to know what Cattell are meetest for his draught; as whether Oxen, or Horse, or both Oxen and Horse: wherein is to bee vnderstood, that although of all draughts whatsoever within this kingdome, there is none so good to plow withall, both in respect of the strength, stability, indurance and fitnesse for labour, as the Oxen are, in whom there is seldome or neuer any losse, because whensoever his seruice faileth in the draught, his flesh will be of good price in the shambles; yet notwithstanding in this case a man must necessarily bind himselfe much to the custome of the Countrey, and fashion of his neighbours; for if you shall liue in a place where fuel is scarce, and far to be fetcht, as commonly it is in all barren Countreies, which for the most part are stony Champaines or cold Mountaines; and your neighbours as well for the speed of their iournies, as for the length keepe horse draughts: in this case you must also doe the like, or else you shall want their companies in your iourney, which is both discomfort and disprofit if any mischance or casualty shall happen, or being infort to driue your oxen as fast as they do their horse you shall not only ouerheat, tire, bruisse, & spoile them; but also make them vtterly vnfit either for feeding or labour: and therefore if your estate be mean, and that you haue no more but what necessitie requires, then you shall

Of Cattell
for draught.

sort your Plow or Teeme according to the fashion of your Countrey, and the vse of your neighbours : but if God haue blest you with plenty, then it shall not be amiss for you to haue euer an Oxe draught or two to till your Land; and a Horse draught to doe all your forraine and abroad businesse : so shall your worke at home euer goe constantly forward, and your outward necessarie provisions neuer be wanting. Now for the mixture of Oxen and Horse together, it falleth out oftentimes, that the Plowman must of force be provided with cattell of both kind, as if he happen to liue in a Rockie Countrey, where the steepness of the hils, and narrowness of the waies will suffer neither Cart, Waine, nor Tumbrell to passe; in this case you shall keep Oxen for the Plow to till the ground with, and Horses to carie pots or hookes : the first to carie forth your measure, and the other to bring home your hay and corne harvest, your fuell and other provisions which are needfull for your familie; as they do both in Cornwall, and all other mountainous countries, where Carts and Waines and such like draughts, haue no possible passage.

Againe, it is the office and dutie of euerie good Plowman to know his seuerall labours for euerie seuerall Moneth though the whole yeare, whereby no day nor houre may bee misspent, but every time and season employed according as his nature requireth : as thus for example.

[January.]

In the moneth of Ianuary, the painfull Plowman, if he liue in fertile and good soiles, as among rich, stiffe, simple clayes, hee shall first plow vp his pease earth, because it must lie to take baite before it be sowne; but if hee liue in fruitfull well mixt soyles, then in this moneth hee shall begin to fallow the field he will lay to rest the yeare

follow

following ; but if hee liue vpon hard barren earths (of which chiefly I write) then in this moneth hee shall water his Meadows and Pasture grounds, and he shall draine and make dry his arable grounds, especially where he intends to sow Pease, Oates, or Barly, the seed-time following. Also he shall stub vp all such rough grounds as he intends to sow the yeare following, and shall meazure and trim vp your Garden moulds, you shall comfort with meazure, sand, or lime, or al three mixt together, the roots of all barren fruit trees : and also cut downe all such timber, onely there will be losse in the barke, for the time is something too early for it to rise. Lastly, you may transplant all sorts of Fruit trees, the weather being open, and the ground easie: you may reare Calues, remoue Bees, and for your owne health keepe your bodie warme, let good diet and wholesome be your Physitian, and rather with exercise then sauce, encrease you appetite.

In the Moneth of Februarie, either set or sow all sorts February of Beanes, Pease, and other Pulse, and the stiffer your ground is, the sooner begin your worke, prepare your garden mould, and make it easie and tender, prune & trim all sorts of Fruit trees from mosse, cankers, and all superfluous branches ; plash your hedges, and lay your quicksets close and intire together ; plant Roses, Gooseberries, and any fruit that growes vpon little bushes ; graft at the latter end of this moneth vpon young and tender stockes, but by all meanes ouerlade not the stockes.

Lastly, for your health, take heed of cold, forbear meats that are slimy and flegmaticque, and if need require, either purge, bathe, or bleed, as Art shall direct you.

In the moneth of March, make an end of sowing of all March sorts of small pulse, and beginne to sow Oates, Barly, and Rye, which is called March Rye ; graft all sorts of fruit trees,

trees, and with young plants and syens replenish your Nurcery, couer the roots of all trees that are bared, and with fat earth lay them close and warme: if any tree doe grow barren, bore holes in the roor, and driue hard wedges or pins of oake wood therein, & that will bring fruitfulness: transplant all sorts of Sommer flowers, and giue new comfort of manure and earth to all early outlandish flowers, especially to the *Crowne Emperiall*, *Tulippos*, *Hyacinth*, and *Narcissus*, of all shapes and colours, cut downe vnder wood for fuell and fencing, and looke well to your Ewes, for then is the principall time of yeaning: And lastly, bathe often, bleede but vpon extremitie, purge not without good counsell, and let your dyet bee coole and temperate.

April.

In the moneth of Aprill finish vp all your barley seed, and begin to sow your hempe and Flax: sow your garden seeds and plant all sorts of herbes; finish grating in the stocke, but beginne you principall inauguration, for then the rynd is most plyant and gentle: open your hiues, and giue Bees free liberty, leaue to succour them with food, and let them labour for their liuing. Now cut downe all great Oake timber, for now the barke will rise, and bee in season for the Tanner. Now scowre your ditches, and gather such manure as you make in the streets and high-ways, into great heapes together; lay your meadowes, sleight your corne grounds, gather away stones, repaire your high-ways, set Ozyers and Willows, and cast vp the bankes and mounds of all decayed fences.

Lastly, for your health, eyther purge, bathe or bleed, as you shall haue occasion, and vse all wholsome recreation, for then moderate exercise in this moneth, there is no better Physicke.

May.

In the moneth of May sow barley vpon all light sands

sands & burning grounds, so likewise do your hempe and flaxe, & also al sorts of tender garden seeds as are Cucumbers and Mellons, and al kind of sweet smelling hearbs and flowers; Fallow your stiffe clayes; Sommer stirre your mixt earths, and foyle all light & loose hot sands: prepare all barren earth for Wheat and Rye, Burne bait, Stub gorse or Furres, and root out Broome and Ferne: begin to fould your sheepe, lead forth measure, and bring home fuell and fencing, weed your winter corne, follow your common wotkes, and put all sorts of cattle to grasse, either in pasture or teather: put your Mares to the horse, let nothing be wanting to furnish the Dairy: and now put off al your winter-fed fat cattle, for now they are scarcest and dearest, put yong steares and dry kine now to feed at fresh grasse, and away with all Pease fed sheepe for the sweetness of grasse mutton will pull downe their prices.

Lastly for your health, vse drinkes that will coole and purge the blood, and all other such physicall precepts, as true Art shall prescribe you: But beware of Mountebanks and old wiuers tales; the latter hath no ground, and the other no truth but apparant cosenage.

In the moneth of Iune, carie sand, marle, lyme, and measure of what kinde soeuer to your land; bring home your coales and other necessary fuell fetcht farre off; sheare early fat sheepe, sow all sorts of tender hearbs; cut ranke low medowes, make the first returne of your fat cattle, gather early Sommer fruits, distill all sorts of Plants and hearbs whatsoeuer.

Iune.

And lastly for your health, vse much exercise, thin dyet, and chaste thoughts.

In the moneth of Iuly, apply your hay-haruest, for a day slackt is many pounds lost, chiefly when the weather is vnconstant, sheare al manner of field-sheepe, Sommer-stir rich

Iuly.

rich stiffe grounds, foyle all mixt earths, and latter foyle all loose hot sands, let hearbs you would preferue, now runne to seed, cut off the stalkes of outlandish flowers, and couer the roots with new earth, so well mixt with meane as may be, sell all such Lambes as you feed for the Butcher, and still leade forth sand, marle, lyme and other meane; fence vp your Copses, graze your elder vnder woods, and bring home all your field-timber.

And lastly for your health, abstaine from all Physicke, bleed not, but vpon violent occasion, and neither meddle with Wine, Women, nor other wantonnesse.

August.

In the moneth of August apply your Corne-haruest, sheare downe your Wheat and Rye, mowe your Barley and Oats, and make the second returne of your fat sheepe and cattle; gather all your Sommer greater fruit, as plums, apples, and peares, make your sommer or sweet Perry & Cider; set slips and Syens of all sorts of Gilly-flowers, and other flowers, & transplant them that were set the spring before: and at the end of this moneth, begin to winter-rigge all fruitfull soiles whatsoeuer; geld your Lambes, cary meane from your doue-coats, and put your Swine to the early or first mast. And lastly for your health, shun feasts and banquets, let physick alone, hate wine, and only take delight in drinke that are coole and temperate.

September.

In the moneth of September, reape your Pease, Beanes, and all other Pulse, making a finall end of your haruest; now bestow vpon your wheat land your principall meane, and now sow your Wheat and Rye, both in rich, and in barren climats; now put your swine to mast of all hands, gather your winter fruit, and make sale of your wooll, and other sommer commodities; now put off those stocks of Bees, you meane to sell or take for your owne vse; close thatche, and dawbde warme, all the surui-
uing

uing hiues, and looke that no droanes, mice or other vermine be in or about them, now thatche your stackes and reekes, thrash your seed Rye and Wheat, and make an end with your cart of all foraine iourneys.

Lastly, for your health in this moneth vse Physicke, but moderately, forbear fruits that are too pleasant or rotten, and as death shun ryot and surfet.

In the moneth of October, finish vp your Wheat-seed; October.
scowre ditches and ponds, plash and lay hedges & quickset, transplant, remoue, or set all manner of fruit trees of what nature or qualitie soeuer; make your winter cider and perry, spare your priuate pastures, and eat vp the corne-fields and commons, and now make an end of winter ridging; draw furrowes to draine and keepe dry your new sowne Corne, follow hard the making of your malt; reare all such calues as shall fall, and weane those foales from your draught mares, which the Spring before were foaled: now sell all such sheepe as you will not winter, giue ouer folding, and separate Lambes from the Ewes which you purpose to keepe for your owne stocke.

Lastly, for your health refuse not any needfull physicke at the hands of the learned Physician, vse all moderate sports, for any thing now is good which reuiueth the spirits.

In the moneth of Nouemb. you may sow either wheat, November.
or Rye in exceeding hot soyles, you may then remoue all sorts of fruit trees, and plant great trees, either for shelter or shadow: now cut down all sorts of timber, for plowes, carts, axeltrees, naues, harrows, & other husbandly offices, make now the last returne of your grasse fed cattle; bring your swine from the maste, and feed them for slaughter, reare what calues so euer fall, & breake vp all such Hemp and Flaxe as you intend to spin in the winter season.

Lastly,

Laſtly, for your health, eate wholeſome and ſtrong meats, well ſpiced and dreſt, free from rawneſſe, drinke ſweet wines, and for diſgeſtion euer before cheeſe prefer good and moderate exerciſe.

December.

In the moneth of December, put your ſheepe and ſwine to the Peaſe reekes, and fat them for the ſlaughter and market; now kill your ſmall Porks and large Bacons, lop hedges and trees, ſaw out your timber for building, and lay it to ſeaſon, and if your land bee exceeding ſtiſſe, and riſe vp in an extraordinarie furrow, then in this moneth begin to plow vp that ground whereon you meane to ſow cleane Beanes only, now couer your dainty fruit trees all ouer with canuaſe, and hide all your beſt flowers from froſts and ſtormes with rotten old horſe litter; now draine all your corne-fields, and as occaſion ſhall ſerue, ſo water and keepe moiſt your medowes; now become the Fowler with piece, nets and all manner of engin, for in this moneth no foule is out of ſeaſon: Now fiſh, for the Carpe, the Breame, Pyke, Tench, Barbel, Peale and Salmon. And laſtly, for your health, eate meats that are hot and nourishing: drinke good wine that is neat, ſprightly and luſty, keep thy body well clad, and thy houſe warme, forſake whatſoeuer is flegmatick, and baniſh all care from thy heart, for nothing is now more vnwholeſome, then a troubled ſpirit.

Many other obſervations belong vnto the office of our ſkilfull Plowman or Farmer; but ſince they may be imagined too curious, too needleſſe, or too tedious, I will ſtay my pen with theſe already rehearſed, and thinke to haue written ſufficiently, touching the application of grounds and office of the Plowman.

FINIS.

Cheape and Good

HVSBANDRY

For the well-Ordering of all
Beasts, and Fowles, and for the
generall Cure of their Diseases.

Contayning the Natures, Breeding, Choise, Vse, Feeding,
and Curing of the diseases of all manner of Cattell, as *Horse,*
Oxe, Cow, Sheepe, Goates, Swine, and tame-Conies.

Shewing further, the whole Art of Riding great-Horses, with the
breaking and ordering of them : and the dieting of the Running,
Hunting, and Ambling Horse, and the manner how
to vse them in their trauaile.

*Also, approued Rules, for the Cramming and Fattning of all sorts of
Poultry and Fowles, both tame and wilde, &c. And diuers good and
well-approued Medicines, for the Cure of all the diseases
in Hawkes, of what kinde soeuer.*

Together with the Vse and Profit of Bees : the making of Fish-ponds,
and the taking of all sorts of Fish,

Gathered together for the generall good and profit of this whole
Realme, by exact and assured experience from English practises,
*both certaine, easie, and cheape : differing from all former and
forraine experiments, which cyther agreed not with
our Climate, or were too hard to come by,
or ouer-costly, and to little purpose : all
which herein are auoyded.*

The third Edition.

LONDON:

Printed by T.S. for Roger Iackson, and are to be sold at his Shop
neere the Conduite in Fleetstreet. 1623.

Chapman and Good

—HVSBAIDRY

For the well-Ordering of all

Baile, and Howell, and for the

[Faint, illegible handwritten text]

Q. And you have not been able to find any other evidence of this kind?

373522

Printed by T. S. for George G. and Son, 100 N. 1st St. St. Louis, Mo.



TO THE RIGHT HONOURABLE, AND

most truely ennobled with all inward and

outward Vertues, RICHARD SACKVILE,

Baron of Buckhurst, and

Earle of Dorset, &c.



*Although the monstrous shapes of
Bookes (Right Honourable and
best ennobled Lord) haue with
their disguised and vnprofita-
ble vizard-like faces, halfe sca-
red euen Vertue her selfe, from
that ancient defence and patronage, which (in for-
mer ages) most Nobly she imployed, to preserue them
from Enuy: yet so much I know the largenesse of your
worthy breast is indewed with wisdom, courage,
and bounty, that notwithstanding the vanities of our
ignorant Writers, you will be pleased out of your
Noble Spirit, fauourably to behold whatsoeuer shall
bring*

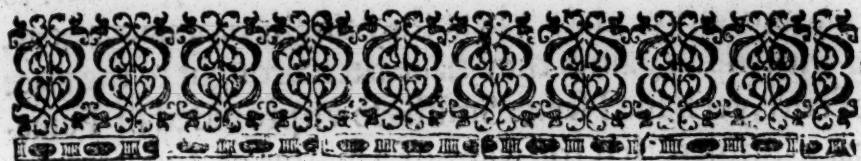
The Epistle Dedicatorie.

bring a publike good to our Countrey ; at which end I haue onely aymed in this small Booke. In which, hauing runne farre from the way or tract of other Writers in this nature , yet I doubt not but your Honour shall finde my path both more easie , more certaine, and more safe then any; nay, by much , farre lesse difficult or dangerous to walke in. I must confesse, something in this nature I haue formerly published , as namely of the Horse onely ; with whose nature and vse I haue beene exercised and acquainted from my Childe-hood : and I hope , without boast , neede not yeeld to any in this Kingdome. Yet in this worke, I hope, your Lord-ship, and all other Princely maintainers of that worthy and seruiceable beast , shall finde I haue found out, and herein explained a nearer and more easie course for his preservation and health, then hath hitherto beene found or practised by any, but my selfe onely. Whatsoever it is, in all humblenesse, I offer it as a sacrifice of my loue and seruice to your Honour, and will euer whilst I haue breath to be,

be your Honours

in all dutifull seruice,

G. M.



TO THE COURTEOUS READER.



Here is no Artift or man of Induftry
(Courteous and Gentle Reader)
which mixeth Iudgement with his
Experience, but findeth in the tra-
uell of his labours, better and nearer
courfes to make perfit the beauty of
his worke, then were at firft pre-
fented to theeye of his knowledge: for the minde being
pre-occupied and bufied with a vertuous fearch, is euer
ready to catch hold of whatfoeuer can adorne or illu-
ftrate the excellency of the thing in which he is imploy-
ed: and hence it hapneth that my felfe hauing ferioufly
befowed many yeares to finde out the truth of thefe
knowledges, of which I haue intreated in this Booke;
haue now found out the infallible way of curing all dif-
eafes in Cattell, which is by many degrees more certaine,
more eafie, leffe difficult, and without all manner of coft
and extraordinary charges, then euer hath been publi-
fhed by any home-borne, or forraine praftifer. Wherein
(friendly Reader, thou fhalt finde that my whole drift is
to helpe the needfull in his moft want and extremitie.
For hauing many times in my iourneying feene poore
and rich mens Cattell fall fodainly ficke, fome traouelling
by the way, fome drawing in the Plough or draught, and
fome vpon other imployments; I haue alfo beheld thofe

To the Courteous Reader.

Cattell or Horſe dye ere they could be brought either to Smith, or other place where they might receiue cure; nay, if with much paines they haue been brought to the place of cure, yet haue I ſeene Smiths ſo vnprovided of Pothe-cary ſimples, that for want of a matter of fixe-pence, a beaſt hath dyed worth many Angels. To preuent this, I haue found out theſe certaine and approued Cures; wherein if euery good Horſe-louer, or Huſbandman, will but acquaint his knowledge with a few hearbs and common weeds, he ſhall be ſure in euery Field, Paſture, Meadow, or Land-furrow; nay, almoſt by euery high-way ſide or blinde ditch, to finde that which ſhall preſerue and keepe his Horſe from all ſodaine extremities. If thou ſhalt find benefit, thinke mine houres not ill waſted; if thou ſhalt not haue occaſion to approue them, yet giue them thy gentle paſſage to others, and thinke me as I am,

Thy friend.

G. M.



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FINIS.



A SHORT TABLE,

expounding all the hard words
in this Booke.

A *Vripigmentum*, or *Orpment*, is a yellow hard substance to be bought at the Pothecharies.

Aristolochia longa, otherwise called red *Madder*, is an hearbe growing almost in every field.

Aristolochia rotunda, is the hearbe called *Galingale*.

Agrimonic, or *Egrimonie*, is an vsuall and knowne hearbe.

Anceos, or *Comin-royall*, is an hearbe of some called *Bulwort*, *Bishops-weed*, or *Hearb-william*.

Anise, is that hearbe which beares *Anise-seeds*.

Anet, of some called *Dill*, is an hearbe like *Fenell*, onely the seeds are broad like *Orange-seeds*.

Agnus-castus, of some called *Tutesaine*, is an hearbe with reddish leaues, and sinewie like *Plantaine*.

Egyptiacum, is a reddish *unguent* to be bought at the Pothecharies, and is soueraigne for *Fistulaes*.

Assafetida, a stinking strong gumme to be bought at the Pothecharies.

Adrases, or *Adarces*, is that *Salt* which is ingendred on the salt Marshes by the violence of the Sunnes heat after the tyde is gone away.

Asterion, is an hearbe growing amongst stones, as on wallcs, or such like, it appeareth best by night, it hath yellow flowers like *Foxegloues*, and the leaues are round and blewish.

Aloes, is a bitter gumme to be bought at the Pothecharies.

B *Etin*, or *Beets*, is an hearb with long broad leaues indented, and growes in hedge-rows.

Bolarmeniake, is a red hard earthy substance, to be bought

A Table for hard words.

at the Pothecaries, and is of a cold and binding nature.

Broomewort is an hearbe with browne coloured leaves, and beareth a blew flower, and most commonly growes in woods.

C

Cresses are of two kindes, *water-Cresses*, and *land-Gresses*; they haue broad smooth leaues, and the first growes in moist places, the latter in Gardens, or by high-ways.

Comin, see *Ameos*.

Carthamus is an hearbe in taste like *Saffron*, and is called *bastard-Saffron*, or *mocke-Saffron*.

Calamint is an ordinary hearbe, & groweth by ditches sides by high-ways, and sometimes in Gardens.

Coleander is an hearbe which beareth a round little seed.

Chines are a small round hearbe growing in Gardens, like little young *Onions* or *Scallions* not aboue a weeke old.

D

Diapente, a soueraigne powder made of five equall simples, as *Bay-berries*, *luy*, *Aristolochia-rotunda*, *Myrrhe*, and *Gentiana*, and may be bought of the Pothecarie.

Dettony is an hearbe called *Pepper-wort*, or *horse-Radish*, and groweth in many open fields.

Dragons is an hearbe common in euery Garden.

E

Elecampana is an hearbe of some called *Horse-helme*, and growes almost in euery field, and euery Garden.

Eyebright is an hearbe growing in euery meadow.

F

Fennegreake is an hearbe which hath a long slender trayling stalke, hollow within, and sowne in Gardens, but easiest to be had at the Pothecaries.

Ferne Osmund is an hearbe, of some called *Water-serne*, hath a triangular stalke, and is like *Polipody*; and it growes in bogs, and hollow grounds.

G

Galingale, see *Aristolochia-rotunda*.

H

Horse-mint is an hearbe that growes by waters sides, and is called *Water-mint*, or *Brooke-mint*.

Horsehelme, see *Elecampana*.

A Table for hard words.

House-lecke, is a weed which growes on the tops of houses that are thatcht, and are like vnto a small *Hartshoeke*.

Hearbe-Robert, hath leaues like *Hearbe-Bennet*, and small flowers of a purple colour, and growes in most common fields and Gardens.

I

I*very*, is the shauings of the *Elephants-tooth*, or the old *Hart* or *Stags-horne*, being the smooth white thereof.

K

K*Not-grasse*, is a long running weed, with little round smooth leaues, and the stalke very knotty and rough, winding and wreathing one leame into another very confusedly, and groweth for the most part in very moist places.

L

L*ettice*, is a common sallet-hearbe in euery Garden.

Lollum, is that weed which we call *Cockell*, and groweth amongst the corne in euery field.

Lusiwort, is a common hearbe in euery Garden.

M

M*ayth*, is a weed that growes amongst corne, and is called of some *Hogs-Fennell*.

Myrrhe, is a gumme to be bought at the Potheccaries.

Mandragg, is an hearbe which growes in Gardens, and beareth certaine yellow Apples, from whence the Potheccaries draw a soueraigne oyle for broken bones.

N

N*eefe*, see *Calamint*.

O

O*riganum*, is an hearb called wilde-*Marioram*, and groweth both in open fields, or in low copses.

Orifice, is the mouth, hole, or open passage of any wound or vicer.

Opoponax, a drug vsuall to be bought at the Potheccaries.

P

P*itch of Burgundy*, is *Rossen*, and the blacker the better.

Plantaine, is a flat leafe and sinewie, growing close to the ground, and is called *Whay-bred* leafe.

Pulicoll-royall, is an hearbe that groweth both in fields and gardens, and is best when it flowreth.

A Table for hard words.

Patch-grease is that rallow which is gotten from the boyling of *Shoemakers shreds*.

Q²*uinquesolio*. of some called *Cinquesoyls*, is that hearbe, which is called *Fine-leaved grasse*.

R^R*ed Oaker* is a hard red stone which we call *Raddle, Orell, Marking-stone*.

S^S*ellondine* or *Tetterwort* is a weede growing in the bottome of *Shedges*, which being broke, a yealow iuyce will drop and runne out of it.

Shirwit is an hearbe with many small leaues, and growes most in *Gardens*.

Stubwort is an hearbe which growes in woody places, and is called *Wood-Sorrell*.

Sanguis Draconis is a hard red gumme to be bought at the *Pothecaries*.

Stonecrop is a greene weede growing on the tops of wals.

Sparma-Cata is the seed of the *Whale*, excellent for inward bruises, and to be bought at the *Pothecaries*.

Salarmoniack is a drug to be bought at the *Pothecaries*.

T^T*ussilaginis* is that weed which we call *Colts-foot*.

Treapharmicon a composition made of three simples, and to be bought at the *Pothecaries*.

Turnericke is a yealow simple, of strong saour, to be bought at the *Pothecaries*.

V^V*erdi-grease* is a green fatty gumme drawne from *Copper*, and is to be bought at the *Pothecaries*.

VV^W*ood-Rose*, or *Wilde-Eglantine*, is that small thin flower which growes vpon *Bryars* in woods or hedges.

Y^Y*arrow* is an hearbe called the *Water-Violet*, and growes in *Lakes* or *marsh grounds*.

FINIS.

Thine Garuase Markhame.

The deuision of the Titles entreated
of in these Bookes following.

- F**irst, of the *Horse*, his Nature, Diseases, and Cures : with the whole Art of Riding, and ordering all sorts of *Horses*, from fol. 1. to 85.
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THE GENERALL

Cure and Ordering of all HORSES:

As also the whole Art of riding great Horses,
with the breeding, breaking, and ordering of them:

Together with the manner how to vse the running,
hunting, and ambling Horse, before, in,
and after their trauaile.

Of the Horse.

CHAPTER I.

*Of the Horse in generall, his choise for euery seuerall vse, his
Ordering, Diet, and best preservation for health, both in
trauaile and in rest.*

THe full Scope and purpose of this
Worke, is in few, plaine, and most
vndoubted true words, to shew the
Cure of all manner of diseases be-
longing to all manner of necessary
Cattell, nourished and preserved for
the vse of man; making by way of
demonstration so easie and plaine a passage to the vnder-
standing and accomplishment of the same, that not the
simplest, which hath priuiledge to be esteemed no Idiot;
nor the poorest, if he can make two shillings, but shall
both vnderstand how to profit himselfe by the Booke,

C

and

and at the dearest rate purchase all the receipts and simples declared in the whole volume. For in sober truth, this Booke is fit for euery Gentleman, Husbandman, & goodmans pocket, being a memory which a man carrying about him will when it is cald to account, giue a man full satisfaction, whether it be in the Field, in the Towne, or any other place, where a man is most vnprovided.

Nature of
Horses.

And now forasmuch as the Horse of all creatures is the noblest, strongest, and aptest to doe a man the best and worthiest seruices, both in Peace and Warre, I thinke it not amisse first to begin with him. Therefore for his nature in generall: He is valiant, strong, nimble, and aboue all other beasts most apt & able to endure the extreamest labours, the moyst qualitie of his composition being such, that neither extreame heat doth drie vp his strength, nor the violence of cold freeze the warme temper of his moving spirits, but that where there is any temperate gouernement, there he withstandeth all effects of sicknesse, with an vncontrolled constancie. He is most gentle and louing to the man, apt to be taught, and not forgetfull when any impression is fixed in his braine. He is watchfull aboue all other beasts, and will indure his labour with the most emptiest stomacke. Hee is naturally giuen to much cleanness, is of an excellent scent, and offended with nothing so much as euill saours.

The choise
of Horses,
and their
shapes.

Now for the choise of the best Horse, it is diuers, according to the vse for which you will imploy him. If therefore you would haue a Horse for the Warres, you shall chuse him that is of a good tall stature, with a comely leane head, an out-swelling fore-head, a large sparkling eye, the white whereof is couered with his eye-browes, and not at all discerned, or if at all, yet the least is best; a small thinn eare, short and pricking; if it be long, well carried,

carried, and ever mouing, it is tollerable; but it dull or hanging, most hatefull; a deepe necke, large crest, broad breast, bending ribs, broad and straight chine, round and full buttocke, with his huckle-bones hid, a taile high and broad, set on neither too thicke nor too thin; for too much haire shewes sloath, and too little, too much choller and heat: a full swelling thigh, a broad, flat, and leane legge; short pasterns, strong ioyned, and hollow hoves, of which the long is best, if they be not wierd, and the broad round the worst.

The best colours are Browne-bay, Dapple-gray, Colours of Roand, Bright-bay, Blacke with a white nare-foote be- Horses. hinde, white farre-foot before, white rache or white star, Chesse-nut or Sorrell, with any of those markes, or Dun with a blacke list: and of these Horses, for the warresthe courser of Naples is accounted the best, but the Turke, the Ienner, the Almaine, Freison, or the largest of our English races, or any bastard of the other races will serue sufficiently.

If you will chuse a Horse for a Princes Seat, any su- Horse for preame Magistrate, or for any great Lady of State, or wo- a Princes man of eminence, you shall chuse him that is of the finest Seate. shape, the best reyne, who naturally beares his head in the best place, without the helpe of the mans hand, that is of nimblest and easiest pace, gentle to get vpon, bold without taking affrights, and most familiar and quiet in the company of other horses: his colour would ever be milke white, with red fraynes, or without, or else faire dapple-gray, with white maine and white taile.

If you will chuse a horse onely for Trauell, euer the bet- Horses for ter shape, the better hope, especially looke that his head trauaile. be leane, eyes swelling outward, his necke well risen, his chine well risen, his ioyns very strong, but aboue all, his

pasternes short and straight, without bending, in his going, and exceeding hollow and tough Houes: let him be of temperate nature, neither too furious, nor too dull, willing to goe without forcing, and not desirous to run when there is no occasion.

**Hunting-
Horses.**

If you will chuse a horse for Hunting, let his shape in generall be strong and well knit together, making equall proportions; for as vnequall shapes shew weaknesse, so equall members assure strength and indurance. Your vnequal shapes are, a great head to a little necke, a bigge body to a thinne buttocke, a large limbe to a little foot, or any of these contraries, or where any member suits not with the whole proportion of the body, or with any limbe next adioyning. Aboue all, let your hunting horse haue a large leane head, wide nostrils, open chauld, a biggewestland, and the winde-pipe straight, loose, well couered, and not bent in the pride of his reyning: the English horse is of all the best.

**Running-
Horses.**

If you chuse a horse for Running, let him haue all the finest shape that may be, but aboue all things let him be nimble, quicke and fiery, apt to flye with the least motion: long shapes are sufferable, for though they shew weaknesse, yet they assure sodaine speed. And the best Horse for this vse, is the Barbary, or his bastard, Iennets are good, but the Turkes are better.

**Coach-
Horses.**

If you will chuse a horse for the Coach, which is called the swift draught, let his shape be tall, broad and well furnished, not grosse with much flesh, but with the bignesse of his bones; especially looke he haue a strong necke, a broad breast, a large chine, sound cleane limbes, & tough houes: and for this purpose your large English Geldings are best, your Flemish Mares next, and your strong ston'd horses tollerable.

If you will chuse a Horse for portage, that is, for the Packe-hor-
 Packe or Hampers, chuse him that is exceeding strong of les.
 body and limbes, but not tall; with a broad backe, out-
 ribs, full shoulders, and thicke withers: for if he be thin
 in that part, you shall hardly keepe his backe from gal-
 ling: be sure that he take a long stride with his feet, for
 their pace being neither trot nor amble, but onely foot
 pace, he which takes the largest strides, goes at the most
 ease, and rids his ground fastest.

Lastly, if you will chuse a horse for the Cart or Plough, Cart-horses
 which is the slow draught, chuse him that is of most or-
 dinary height; for horses in the Cart vnequally sorted, ne-
 uer draw at ease, but the tall hang vp the low horse. Let
 them be of good strong portion, bigge breasted, large bo-
 died, and strong limb'd, by nature rather inclin'd to craue
 the whip, then to draw more then is needfull. And for
 this purpose Mares are most profitable; for besides the Of Mares.
 effecting of your worke, they yearely bring you forth
 increase: therefore if you furnish your draught with
 Mares to breed, obserue in any wise to haue them faire-
 handed, that is, good head, necke, breast and shoulders;
 for the rest it is not so regardfull, onely let her body
 be large, for the bigger roome a Foale hath in the
 dammes belly, the fairer are his members. And aboue
 all things, obserue neuer to put your draught beasts
 to the saddle, for that alters their pace, and hurts them
 in their labour.

Now for the ordering of these seuerall horses: first for Ordering
 the horse for Service, during the time of his teaching, of Horses.
 which is out of the wars, you shall keep him high & lusti- for Service.
 ly; his food, much straw & little hay, his prouender cleane
 drie Oats, or two parts Oats, and one part Beanes or
 Pease, well dried and hard, the quantitie of a pecke at a
 watering,

watring, yet not giuen all at once, but at feuerall times. In his dayes of rest you shall dresse him betwixt fīue and sixe in the morning, water betwixt seauen and eight, and feede from nine till after eleauen: in the afternoone you shall dresse betwixt three and foure, water betwixt foure and fīue, and giue prouender till sixe, then litter at eight, and giue food for all night. The night before he is ridden, you shall at nine of the clocke at night take away his hay from him; at foure of the clocke in the morning giue him a handfull or two of Oats, which being eaten, turne him vpon his snaffle, rub all his body and legges ouer with drye cloathes, then saddle him, and make him sit for his exercise. Soone as he is call'd for to be ridden, wash his bit in faire water, and put it into his mouth with all other things necessary, draw vp his girths, and see that no buckles hurt him: then leade him forth, and as soone as he hath beene ridden, all sweating as he is, leade him into the stable, and first rubbe him quickly ouer with drye wispes, then take off his saddle, and hauing rubd him all ouer with drie cloathes, put on his housling cloth, then set on the saddle againe, and girt it; then leade him forth, and walke him vp and downe in gentle manner, an houre or more, till he be cold: then set him vp, and after two or three houres fasting, turne him to his meate: then in the after-noone, curry, rub, and dresse him, then water him, and order him as is afore-said.

Ordering of
Horses for
Princes
seats,

For ordering of the horse for a Prince, or great Ladies seate, let it be in his time of rest, like vnto the horse for seruice; and in his time of labour like the trauellling horse, as shall be shewed instantly: onely because he is to be more choisely kept, I meane in the beautifullest manner, his coate lying smooth and shining, and his whole body without any staine or ill-fauourdesse, you shall euer
when

when he hath bene ridden, and commeth in much sweating, presently haue him into the stable, and first rub him downe with cleane wisps, then taking off his saddle, with a sword-blade whose edge is rebated, you shall stroake his necke and body cleane ouer, leauing no sweat nor filth that can be gotten out; then cloath him vp, and set on the saddle, and walke him forth as aforesaid: after, order and diet him as you doe other traouelling horses: drie Oats is his best prouender if he be fat and full; and Oats and Beanes, if he be poore, or subiect to lose his flesh quickly.

For your traouelling horse, you shall feede him with the finest Hay in the Winter, and the sweetest Grasse in Summer: his prouender would be drie Oats, Beanes, Pease or Bread, according to his stomacke: in the time of rest, halfe a pecke at a watering is sufficient; in the time of his labour, as much as he will eat with a good stomacke. When you trauaile him, water two houres before you ride, then rubbe, dresse, and lastly feede, then bridle vp, and let him stand a quarter of an houre before you take his backe. Trauaile moderately in the morning, till his winde be rack'd, and his limbes warmed, then after doe as your affaires require. Be sure at night to water your horse two miles before you come to your iournyes end; then the warmer you bring him to his Inne, the better: walke not, nor wash not at all; the one doth beget colds, the other foundring in the feete or body: but set him vp warme, well flopt, & soundly rubbed with cleane litter. Giue no meat whilst the outward parts of your horse are hot or wet with sweat, as the eare-rootes, the flankes, the necke, or vnder his chaps: but being dry, rubbe and feede him according to the goodnesse of his stomacke. Change of food begetteth a stomacke, so doth the

Ordering of
trauelling
Horses.

the washing of the tongue or nostrils with vinegar, wine and salt, or warme vrine. Stop not your horses fore-feet with Cowes dung, till he be sufficiently cold, and that the bloud and humours which were dispersed, be settled into their proper places. Looke well to his backe, that the saddle hurt not, to the girts that they gall not, and to his shooes, that they be large, fast, and ealie.

Ordering of Hunting-horses. For the ordering of your Hunting-horse, let him in the time of his rest haue all the quietnesse that may be, much litter, much meat, and much dressing: water euer by him, and leaue him to sleepe as long as he pleaseth. Keep him to dung rather soft then hard, and looke that it be well-coloured and bright, for darkenesse shewes grease, and rednesse inward heating. Let exercises and mashes of sweet Mault after, be his vsuall scowrings, & let bread of cleane Beanes, or Beanes and Wheat equally mixt, be his best food, and Beanes and Oates the most ordinary.

Ordering of Running-horses. For the ordering of your Running-horse, let him haue no more meat then to suffice nature, drinke once in foure and twenty houres, & dressing every day once at Noone onely. Let him haue much moderate exercise, as morning and euening ayrings, or the fetching of his water, and know no violence but in his courses onely. Let him stand darke and warme, haue many cloathes, and much litter, being wheat straw onely. If he be very fat, scoure off; if of reasonable state, scoure seldome; if leane, then scoure but with a sweet mash onely. Be sure your horse be empty before he course, and let his food be the finest, lightest, and quickest of digestion that may be: the sweats are more wholesome that are giuen abroad, and the cooling most naturall which is giuen before he come into the stable. Keepe his limbes with coole oynments, and by no meanes let any hot spices come in his body.

if

if he grow drie inwardly, wash't meate is wholesome. If he grow loose, then giue him straw in more abundance. Burning of sweet perfume in the stable is wholesome; and any thing you either doe about your horse, or giue vnto your horse, the more neate, cleanly, and sweet that it is, the better it nourisheth.

For ordering the Coach-horse, let him haue good Ordering of
dressing twise a day, Hay and Prouender his belly full, Coach-
and Litter enough to tumble on, and hee cannot chuse Horses.
but prosper. Let him be walk't and wash't after travell, for by reason of their many occasions to stand still, they must be inur'd to all hardnesse, though it be much vn-wholesome. Their best food is sweet Hay, and well-dried Beanes and Oates, or Beane-bread: looke well to the strength of their shooes, and the galling of their harnesses: keepe their legges cleane, especially about the hinder fetlocks, and when they are in the house, let them stand warmly cloathed.

For the ordering of the Pack-horse or the Cart-horse, Ordering of
they neede no washing, walking, or houres of fasting; the Packe
onely dresse them well, looke to their shooes and backes, and Cart-
and then fill their bellies, and they will doe their labour. horse.
Their best food is sweet Hay, Chaffe and Pease, or Oate-hulls and Pease, or chopt Straw and Pease mixt together: once a weeke to giue them warme Graines and Salt is not amisse, for their labour will preuent the breeding of wormes or such like mischiefes.

Now for the generall preseruatiō of horses health, it For the pre-
is good whilst a horse is in youth and strength, to let him seruatiō of
bloud twise in the yeare, that is, beginning of the Spring, all horses,
and beginning of the Fall, when you may best afford him
a weekes rest. After you haue let him bloud, two daies af-
ter giue him a comfortable drench, as two spoonefuls of

Diapente, or such like, (which is called *Horse Methridate*) in a quart of strong Ale. Use oft to perfume his head with Frankincense, and in the heat of Summer use oft to swimme him. Let a fat horse drinke oft, and a little at once, and a leane horse whensoever hee hath appetite. Much rubbing is comfortable, and cheareth euery member. Be sure to let your horse eate grasse once in the yeare, for that cooleth the blood, scoureth away grosse humors, and giues great strength and nourishment to the body. If notwithstanding all these principles your horse fall into sicknesse and disease, then looke into the Chapters following, and you shall finde the truest, best approued, and the most familiar medicines for all manner of infirmities, that euer were knowne or published.

CHAP. II.

Of riding in generall, and of all the particular knowledges belonging to the Art of Riding of a great Horse, or Horse for seruice or pleasure.

Imperfect
vse of this
recreation.

HAuing spoken something already of horses; it now followes we say something of the commendable exercise of riding of great horses, which in the very action it selfe speaketh Gentleman to all that are performers or doers of the same. And although our English Gentry from a floath in their industrie, aime for the most part at no more skill then the riding of a ridden & perfect horse, which is but onely the setting forth of another mans vertue, and thereby making themselves richer in discourse then action; yet our English husbandman, or good man, whom I seeke to make exact & perfect in al things, shall not onely recreate himselfe by riding the horses whom other men haue made perfect, but shall by his owne practise bring his horse from vnder ignorance to the best

beſt ſkill that can be deſired in his motions, wherein he ſhall finde a two-fold pleaſure, the one, an excellent contentment to his minde, that he can performe ſo worthy ſure of riding an action without the chargeable aſſiſtance of others; and the other a healthfull ſupport to his body, when by ſuch recreation his ſpirits and inward faculties are revived and inflamed. But now me thinks I heare ſome ſay, that I haue vtterly taken away the tune of this ſtring, I haue ſtricken ſo oft vpon it, and that indeed there can be no delight where there is no variation: and that ſurely I cannot vary any more vpon this plaine ſong, but the world will finde diſcord either in this, or my former deſcants. But let them not deceiue themſelves; for my building ſtandeth on a firme rocke, and I know both ſhall be worthily iuſtifiable: onely this I muſt informe all men, that in times paſt, long ſince, when our firſt rules of Horſemanſhip were giuen vnto vs, our Maſters were not ſo ſkilfull in the abilities of horſes performances as we are, but meaſured them by the proportions of their owne weaker natures, and thence became ſo too much tender ouer them, that they neither reſpected the greatneſſe of their owne labours, nor the length of time, before they aſſumed to their deſires, ſo in the end they might aſpire to their wiſhes with ſafetie and full ſatisfaction: whence it came to paſſe that in thoſe times, & euen now in theſe, (chiefly amongſt thoſe which are meere Riders, and no Keepers) there is no leſſe time allowed to the making vp of a perfect horſe, then two yeeres, when we know, and my ſelfe from experience can iuſtifie the ſame, that if the Rider can keepe as well as ride, that is, giue as well directions for the preſeruation of a horſes health, and the avoidance of ſturrance and ſickneſſe, as put in practice artfully euery violence to be vſed in his leſſons, he may

very well make vp a perfect horse in three moneths, fit either for pleasure or battaile, which is the full scope and end of this Treatise: wherein I would not haue any man expect either new rules, or a contradiction of any already set downe by men of practise and knowledge in the Art; but onely a straightning or drawing of them together into a much narrower compasse, giuing satisfaction to our desires, and finishing vp our worke with speede, which before was almost lost or neglected with the length of our labours, as you shall fully perceiue by this discourse which followeth.

Taming
of a young
Colt.

First then to speak of the taming of a yong colt, which is as it were the preface or introduction to the Art of riding: you shall after he hath bene in the house a weeke or a fortnight, and is familiar with the man, & wil withall patiently indure currying, combing, rubbing, clawing, and handling in euery part and member of his body, without any shew of rebellion or knauishnesse, which you shall compasse by all gentle and easie meanes, doing nothing about him sodainly or rashly, but with leisure and moderation: then you shall offer him a saddle, which you shall set in the manger before him, that he may smell to it, and looke vpon it, and you shall gingle the girths and stirrops about his eares, to make him carelesse of the noise, then with all gentlenesse, after you haue rub'd his sides therewithall, you shall set it on his back, and gird it gently on, & then place his crooper withall ease; which done, you shall take a sweet walking trench, walsh, and annointed with hony and salt, and put it into his mouth, placing it to hang directly about his tush, and as it were a little leaning thereupon: this you shall doe in the morning as soone as you haue drest him, and then thus saddled and bridled you shall leade him forth, and water him in
your

His sadling
and bridling.

your hand abroad : then bringing him in, and after hee hath stood a little reyned upon his trench, an houre or more, take away the bridle and saddle, and let him goe to his meate till the euening : then leade him forth (as before) with the saddle to the water, then when he is set vpon gently take off his saddle and cherish him, and then dresse him, and cloath him vp for all night. The next day saddle and bridle him as before said, and put on him a strong Mustroll of writhen Iron, and a Martingall, which you The first shall buckle at such length that he may no more but feele backing. is when he ierketh vp his head, and then leade him forth into some new plowed field, or soft ground, and there after you haue made him trot a good space about you in your hand, and thereby taken away from him all his wantonnesse and knauish distractions, you shall offer your foot to the stirrop, at which if he shew any distaste, either in body or countenance, you shall then course him about againe: then offer againe, and with leisure rise halfe way vp, and goe downe againe : at which if he shrink, correct him as before, but if he take it patiently, then cherish him, and so mount into the saddle, which done, after cherishing, light downe againe, and giue him bread, or grasse to eate : then looke that your girths be well girted, and strait, that the crooper be strong and of iust length, that the bridle hang even, and in his due place, without inward or outward offence, that your stirrups be fit, and generally all things without offence, either to your selfe or to the beast, and then as before, mount his backe, seat your selfe iust and even in the saddle, make the reynes of your bridle of equall length, carry your rod without offence to his eye, in your right hand, the point either directly vpright, or twarted towards your left shoulder ; Then hauing cherishd him, let the

Grooms which before led him, having his hand on the chaffe halter, leade him forward a dozen or twenty paces, then gently straining your hand, with the helpe of the footman, make him stand still, then cherish him, and leade him forward againe, and doe this fives or sixe times one after another, till by continuall vse you make him of your owne accord (without the footmans helpe,) by giuing your body, and thrusting your legges forward, goe forward, which as soone as he doth, you shall stay him, and cherish him, and then sitting on his backe, let your footman leade him home, and bring him to the blocke, where after you haue cherishd him, you shall gently alight, and cause him to be led vp, and well drest & mended. The next day you shall bring him forth as before, and in all points take his backe as aforesaid, and so by the helpe of the footman trot him forth right halfe a mile at least; then let the footman lay off his hand, and walke by him, till you haue of your selfe trotted him forth another halfe mile, then cherish him, and make the footman giue him some grasse or bread to eate, and then taking a large compasse, trot him home, and bring him to the blocke as before, and there alight, and so set him vp.

The third day let your footman light vpon some spare iade, and then bringing your colt to the blocke, take his backe gently, & after you haue cherishd him, the other riding before you, follow him forth right a mile or two, ever and anone at the end of twenty or thirty score, stopping the colt gently, cherishing him, & making him yeeld and goe backe a step or two, and then putting him forward againe, till he be so perfect, that with the least motion he will goe forward, stop, and retire, which will be effected in two dayes more: in which space if he chance at any time to strike or rebell, you shall make him which rides before

before you take the spare rayne, and leade him forward, whilest you giue him two or three good lashes vnder the belly; and then being in his way, take the spare rayne to your selfe againe: and thus you shall doe till all faults be amended: then you shall spare your horseman or guide, and onely by your selfe for three or foure daies more, trot him euery morning and afternoone, at least three or foure miles forward, vsing him onely to stop and retire, and bringing him home a contrary way to that you went forth, till he be so perfect and willing, that he will take his way how or in what manner your selfe please, euer obseruing to mount and dismount at the blocke onely, except some speciall occasion constrain you to the contrary. This you may well bring to passe the first weeke of the horses riding.

As soone as you see your horse will receiue you to his backe, trot forth-right, stop and retire, and doe all this with great patience & obedience, you shall then call into your mind the three maine points of a Horsemans knowledge, which are helps, corrections, and cherishing: and for helps, they consist in these: First the voice, which sounding sharply and cheerefully, as crying *Via, how, hey*, and suchlike, adde a spirit and liuelinesse to the horse, and lend a great helpe to all his motions: then the bridle, which restrained or at libertie, helps him how to doe, and shewes which way to doe: then the rod, which being onely shewed, is a helpe to direct; being only moued, helps the quicknesse and nimblenesse of the motion; and being gently toucht withall, helps the fortinesse of a horses salts and leapes, and makes him as it were gather all his strength into one point: and lastly, the calues of the legs, stirrop-leathers, and stirrops, which moued by the horses side, helps him to nimblenes, swiftnesse, & readines

The three
main points
of a Horse-
mans skill.

Of helps,
and which
they be.

in turning. Some to these helpes adde the helpe of the spurre, chiefly in high salts or boundings, but it must be done in a iust and true time, and with such gentle bitterness, that the horse may vnderstand it for a help, or else he will take distaste, and finding it sauour like correction, in stead of bettering his doings, do with more disorder, as to sprale with his forefeet in aduancing, to yerke out with one or both his hinder feet in the coruet or bounding, shaking of his head, & such like, as will appear in practise.

Of corrections, and which they be.

Now of corrections the most principall is the spurre, which must not at any time be given triflingly, or itchingly, but soundly and sharply, as oft as iust occasion shall require: then the rod, which vpon disorder, sloth, or miscarriage of the members, must be given also soundly: then the voyce, which being deliuered sharply & roughly, as *ha villaine, carrikra, diablo*, and such like threatnings, terrifieth the horse, and maketh him afraid to disobey: and lastly the bridle, which now and then stricken with a hard chocke in his mouth, reformeth many vices and distemperatures of his head; yet this last must be done seldome, and with great discretion; for to make a custome therof, is the ready way to spoyle a horses mouth.

Of cherishings.

Now of cherishings there are generally in vse but three, as first the voyce, which being deliuered smoothly, and louingly, as crying *holla, so boy, there boy there*, and such like, giues the horse both a cheerefulnesse of spirit, and a knowledge that hee hath done well: then the hand, by clapping him gently on the necke or buttocke, or giuing him grasse or other foode to eat, after he hath pleased you: and lastly, the bigge end of the rod, by rubbing him therewith vpon the withers or maine, which is very pleasing and delightfull to the horse.

Now after these ordinary and actuall helpes, correcti-

ons,

ons, and cherishings, you shall haue respect to the Mus- Of the mus-
 role and Martingale, which carry in them all the three role and
 former both seuerall and vnite: for it is first an especiall martingale.
 helpe and guide to euery well-disposed horse, for setting
 of his head in a true place, forming of his reyne, and ma-
 king him appeare comely and gallant in the eyes of the
 beholders; then it is a sharpe correction when a horse
 yerketh out his nose, or disordereth his head any way,
 or striueth to plunge or runne away with his Rider:
 and lastly, it is a great cherishing to the beast, when hee
 yeeldeth his head to your hand, by shrinking from his
 face, and so leauing any more to torment him, but
 when hee offendeth; whence it comes that more from
 this then any thing else, the Horse first gaineth the
 knowledge of his Masters will, and is desirous to per-
 forme it: therefore you shall be very carefull to the pla-
 cing of this vpon the horse, as first, that it hang some-
 what low, and rest vpon the tender grissell of the horses
 nose, whereby the correction may be the sharper when
 occasion requires it; then that it be loose and not strait,
 whereby the horse may feelee vpon the yeelding in of his
 head, how the offence goeth from him, and so know
 that onely his owne disorder is his owne punishment.
 Lastly, he shall be carefull to note how hee winneth the
 horses head, and by those degrees to draw his Martin-
 gale straiter and straiter, so as the horse may euer haue a
 gentle feeling of the same, and no more, till his head and
 reyne be brought to that perfection which you desire,
 and then there to stay, and keepe the Martingale con-
 stantly in that place onely, which you shall performe in
 those few dayes which you trot your horse forth-right,
 being before you bring him to any lesson, more then
 the knowledge of your selfe, and how to receiue you to

Of treading
the large
rings.

Choice of
ground.

his backe, and trot forth obediently with you. When your horse is brought vnto some certaintie of reyne, will trot forth right with you at your pleasure, and by your former exercise therein is brought to breath and delight in his trauell, which will grow and increase vpon him, as you grow and increase in your labour, then you shall bring him to the treading forth of the large rings in this manner: First, if he be of heavy and sluggish nature, slothfull and dull, and albeit he haue strength and sufficiencie of body, yet you finde him slowely and vnapt, then you shall trot him into some new plow'd field, soft and deepe: but if he be of quicke and of fiery spirit, apt, nimble, and ready to learne, then you shall trot him into some sandy or gravelly place, where is strong and firme foot-hold, and there you shall marke out a spacious large ring, at least threescore or fourescore paces in compasse, and hauing walkt him sixe or seauen times about the same on your right hand, you shall then by a little straitning of your right reyne, and laying the calse of your left legge to his side, make a halfe-circle within your ring vpon your right hand, downe to the center or mid point thereof, and then by straitning your left reyne a little, and laying the calse of your right legge to his side, make another halfe circle to your left hand, from the center to the outmost verge, which two halfe circles contrary turned, will make a perfect Roman S. within the ring; then keeping your first large circumference, walke your horse about on your left hand, as oft as you did on your right, and then change within your ring as you did before to your right hand againe, & then trot him first on the right hand, then on the left, so long as you shall thinke convenient. And although our ancient Masters in this Art haue prescribed vnto vs certaine numbers

numbers of ring-turnes, and how oft it is meete to goe about on either hand, as if all horses were of one enen abilitie, yet I would wish you to neglect those rules, and onely to practise your horse in this lesson, according to his strength of body, sometimes applying him therein an houre, sometimes two, & sometimes three, more or lesse according to your discretion; for the space of time can neither bring wearinesse nor tiring: and for your change of hands, you shall do it as oft as shall seeme best to your selfe, being euer very carefull to giue him the most exercise on that hand, on which he is euer most vnwillingest to goe: and in this lesson be carefull also that hee doe it cheerefully, lustily, and nimbly, quickning and inflaming his spirits by all the meanes possible: and when you finde that he will trot his large rings perfectly, which will questionlesse be in lesse then a weeks space, being well applied therein, for you must not fore-slow any morning except the Sabbaoth, nay hardly any after-noone: also if you finde him slothfull and heauy, for there is no greater hinderance then the Riders too much tendernes, nor no greater furtherance then a continuall moderate exercise: therefore as I said, when he will trot his rings well, then in the same manner, and with the same changes, you shall make him gallop the same rings, which he shall doe also with great dexteritie, lightnesse, and much nimblenesse, without losing the least part or grace of his best reyne, nay so carefull you shall be thereof, that in his galloping you shall as it were gather his body together, and make his reyne rather better then it was, and make him take vp his feet so truly and loftily, that not any eye may see or perceiue a fallshood in his stroke, but that his inward feet play before his outward, and each of a side follow the other so directly, that his gallop may appeare as

Of galloping large rings.

the best grace of all other motions: neither shall you enter him into this lesson rashly & hastily, but soberly and with discretion, making him first gallop a quarter of the ring, then halfe, then three parts, and lastly the whole ring: neither shall you force him into his gallop with violence, or the sharpenes of spurs, but with spirit and mettall, making him by the lightnes and cheerefulnes of your owne body, passe of his owne accord into his gallop, and especially in his changes; where you may let him feele your legges; and shew him your rod on the contrary side: and herein is to be noted, that continually those changes (in as much as they are made in a much straiter compasse) must be done euer with great quicknesse and more stirring nimblenesse then the intire lesson.

Helps in the
large ring-
turnes.

Now for the helps necessary in these large ring-turnes; they consist generally in the voice, rod, calues of your legs, and the bridle: in the voice by quickning him vp, and reuining his spirits when he growes sloathfull, with these words, *How*, *hey*, or *via*: in the rod, by shewing it him on the contrary side, or laying it on the contrary shoulder, and sometimes by shaking it ouer his head (which is a kinde of threatning) chiefly when you make your changes in the calues of your legs, when you clap them hard to the contrary side to which he turneth, or by springing and ierking your legs forward, hard vpon your stirrop-leathers, which will quicken him, and make him gather vp his limbs better then the spurre by many degrees: and lastly in the bridle, by drawing it in a little straiter, and holding it with some more constancie, when you put any of your former helps in vse, or doe any thing with more life or courage, for that maketh him draw his limbes together; and to straiten his rings with a gracefull comelinesse.

For

For the corrections in theſe large rings they be diuers; Corrections
 as namely, the bridle, the ſpurre, and the rod, and ſome- in the ring-
 times the voice, yet that but ſeldome: for the bridle, you turnes.
 ſhall correct your horſe therewith if hee carry his head
 or chaps awry, making as it were mowes and ill-fauoured
 countenances, giuing him now and then a little checke
 in the mouth, and awakening him from ſuch forgetfull
 paſſions, or now and then drawing the trench to and
 fro in his mouth, which will reforme the errour; then the
 ſpurre, which muſt be laid ſharpe and hard to his ſides,
 when you finde your helps will doe no good, but that
 his ſloath rather more and more increaſeth, or when hee
 preſſeth and hangeth hard vpon your hand, or looſeth
 the tutch of his reyne, or ſuch like vices: for the rod,
 when you finde that hee neglecteth the ſhewing or ſha-
 king of it, or when he diſordereth any of his hinder parts,
 and will not gather them vp comely together, then you
 ſhall therewith giue him a ſound laſh or two vnder the
 belly, or ouer the contrarie ſhoulder, and to any of theſe
 former corrections you ſhall euer accompany the threat-
 ning of your voice, when the fault is too much foule, and
 not otherwiſe, becauſe there ſhould be euer an entire loue
 betwixt the horſe and the horſe-man, which continuall
 chiding will either take away, or at leaſt root out the ap-
 prehenſion thereof.

Now for your cheriſhings, they are thoſe which I for- Cheriſhing
 merly ſpake of; onely they muſt be vſed at no time but in the ring.
 when your horſe doth well, and hath pleaſed your minde turne.
 both with his cunning & tractablenes: and although the
 time for the ſame be when he hath finiſhed his leſſons,
 yet there is a ſecret pleaſing & cheriſhing of a horſe with
 the bridle, which muſt be exerciſed in the doing of his
 leſſons, and that is the ſweetning of his mouth by a little

Of stopping
and going
backe.

easing of your bridle hand, and gently drawing it vp backe againe, letting it come and goe with such an vnperceiued motion, that none but the beast may know it.

When your horse can trot & gallop these large rings with all perfectnesse, which with good industrie will be perfected in lesse then a fortnights exercise, you shall then proceede to make him stop faire, comely, and without danger, which you shall doe in this manner: First, as soone as you haue taken his backe, cherish him, put him gently forward, and bring him into a swift trot; after you haue trotted him forty or threescore yards forward, you shall by drawing in your bridle-hand straitly and sodainly, make him gather his hinder-legs and fore-legs together, and so in an instant stand still, which as soone as he doth, immediatly you shall ease your hand a little, yet not so much as may giue him libertie to presse forward, but rather to yeeld backward, which if you finde he doth, you shall giue him more libertie, and cherish him, and then hauing paused a while, draw in your bridle-hand, and make him goe backe two or three paces, at which if he sticke, instantly ease your hand, and draw it vp againe, letting it come and goe till hee yeeld and goe backward, which (for the most part) all horses at the first will doe: but if it be that your horse rebell and will not goe backe with this gentle admonition, you shall then cause a foot-man standing by to put him backe with his hand, and in his motion you shall cherish him, that he may vnderstand what your will is: and thus euery time you make him stop, you shall make him retire backe, till in one space of time you haue made both lessons perfect: and this practise you shall vse both till you come to your large rings, and at euery time that you finish your lesson, or giue the horse breath or ease; whereby

whereby you ſhall perceiue that your horſe ſhall learne to trot and gallop the large rings, to ſtop and retire back all in one ſpace of time, becauſe you ſee ſucceſſively they follow one another, and are to be done (though three) but as one entire leſſon.

Now for the helpes in theſe leſſons, the beſt for ſtop-
ping is the choice of ground, as by making your horſe euer to ſtop down the ſloape of ſome hill, or deſcending ground, whereby he may be compeld to couch his hinder loines the better, and ſo make his ſtop moſt comely, and to obſerue that the ground be firme and hard, without danger of ſliding, leaſt the horſe finding ſuch an imperfection, grow fearefull, and ſo reſuſe to doe your will out of his owne danger. In retyring you ſhall helpe him with your rod, by putting it before his breſt, or ſhaking it before his knees, to make him remooue his feete more quicke and nimbly.

For corrections in ſtopping, it muſt ſometimes bee
done by our ſelfe, as with the euen ſtroke of your ſpurs
when in his ſtop he diſordereth his head, or with any one
ſingle ſpurre, when he caſteth out his hinder loynes, and
will not ſtop right in an euen line; and ſometimes it
muſt be done by another by-ſtander, when he reſuſeth
to ſtop at all, who ſtanding at the place of ſtop, as ſoone
as you draw vp your hand, ſhall with his rod threaten
the horſe, and make him not dare to preſſe forward, or if
he doe preſſe forward, to make him retire ſwiftly backe
ſo much ground as he gained, both your ſelfe and the
by-ſtander rating him with your voyces extremely: for
corrections in retiring, they are the euen ſtrokes of both
your ſpurs when he ſtickes or preſſes vpon your hand,
and will not yeeld backe; & alſo your rod ſtrike ſharpely
vpon his knees and breſt, and the rod of a by-ſtander
ſtrike

strike vpon his breast, knees and face, when his stubbornnesse is too violent.

Cherishings But for his cherishings, they be all formerly spoke of, when your will is comely and obediently performed, besides the addition of some other, as a present easing of your bridle-hand, and the clapping and cherishing of the by-stander, and so suffering him to stand and recover breath a good space after.

Of aduancing before.

When your horse can stop and retire well, which may be done in the same space that you teach him his large ring-turnes, for it is as it were three lessons learnt in one, you shall then teach him to aduance before when he stoppeth, which is very comely and gracefull to the beholders; and you shall doe it in this manner: after you haue stopped your horse, without giuing your hand any ease, you shall lay the calues of both your legges hard to his sides, and adde thereto the noise of the shaking of your rod, and your voyce, by crying *vp, vp*, which will at first (peraduenture) but a little amaze him, because hee vnderstandeth not your meaning: therefore you shall put him forward againe, and doe as before, and that with a little more strength, continuing the practise of the same till you perceiue he taketh one foote from the earth, then cherish him a little, and so to the lesson again, till he take vp both his legges from the ground, which when he doth orderly or disorderly, yet cherish him exceedingly, that he may come to the knowledge of your meaning, without which all your labour is lost; then to your former practise againe, till you haue brought him to that perfectnesse, that hee will with all readinesse aduance as oft as you will giue him the calues of your legs to his sides, be it lesse or more times together; this done, you shall looke to the orderly and comelinesse of his ad-

uancing:

nancing: as first, that he take vp his legs both euen together, and winde them inward towards his body; then that he aduance not too high, (for feare of comming ouer vpon you) but couch his hinder loynes close to the ground; then that hee spraueth not, nor paweth with his feet forward; and lastly, that he aduance not for his owne pleasure, but when you command him by your owne direct and orderly motions, for the contrary is a foule fault in horsemanship.

For helpes in this lesson, they are the calues of your legs, the shaking of your rod ouer his head, & your voice, as is before said, & the descent of some hanging ground, which will make his hinder loynes couch the better.

The corrections are according to the natures of offences, as the euen stroke of your spurres, or a good lasha with your rod, when you see hee fixeth his feet to the ground, and stubbornely applies himselfe to disobey you, or will take vp his feet one after another, and not both together. If hee doe aduance too high, so as hee is ready to come ouer vpon you, or if he spraule or pawe forth with his feet, you shall then not onely giue him both your spurres hard together, but also a good ierke or two with your rod betweene his eares: but if headuance when you would not haue him, you shall then in the same instant ierke him ouer both the knees with your rod; and if hee aduance againe, ierke him againe, not ceasing till he fixe his feet to the ground, or goe backward, and then cherish him.

For particular cherishings in this lesson, they are no other then those formerly spoke of, onely they must be done with a more ready watchfulnesse, in the very instant and moment of time in which he performeth any thing well, that the horse may vnderstand why and

E

wherefore

Helpes.

Corrections

Cherishings

wherefore he receiveth such contentment, and thereby be incouraged to persevere in his goodnesse, and be more ready to apprehend his riders pleasure.

The use of
advancing.

For the use of advancing, it is two-fold; as namely, to give a grace to his other lessons, and to bring his body to nimblenesse: yet for the most part it is onely used at the stop, where when you have finisht any lesson, it then concluding with the stop you make him advance, once, twice, or thrice, it will be both a grace to the beast, and shew much Art in the horse-man; also it maketh a horse apt and ready to turne well, and maketh him trust to his hinder legges, whereby his fore-parts may be directed and governed at the horse-mans pleasure.

Of yerking
behinde.

Next to advancing, you shall teach your horse to yerke behinde, in this manner: when at any time you have made him stop, you shall presently with your rod give him a good ierke vnder the belly neere to his flanke, which though at the first hee apprehend not, yet by a continuall and constant use thereof, you shall in the end bring him to yerke out his hinder legs; at the first doing whereof you shall cherish him, for that is the onely language by which he knowes he doth your will, and then having paused a little, make him doe it againe, increasing it euery day, and doubling his doings till he be so ready, that when you please to give the ierke, he will then give the yerke, and then you shall looke to the comelinesse of his doing, that is to say, that hee yerke not out his hinder legs, till his fore-legs be about the ground, then that hee yerke not one legge farther out then the other, but both even together, then that hee yerke not too high, and lastly, that he yerke not one legge out whilest the other is on the ground, all which are errors of great grosse-
Therefore to make the horse more perfect in this lesson,

it

it shall be good to teach him to yerke out behinde when he standeth in the stable, by ierking him vpon the buttockes with your rod, and not ceasing to molest him till he raise his rumpe above the ground, and then to cherish him, and so to apply him without any ease and rest till he doe your will; then when he is perfect, to put the same in practise when you are in the field on his backe, by turning your rod in your hand to his buttocke-ward, and touching him therewith to make him yerke as aforesaid.

For the helps, they are the constant staying his mouth on the bridle, the stroke of your rod vader his belly, or the gentle touching him vpon the rumpe with the same.

Helpes.

The corrections are onely the euen stroke of your spurs, when either hee refuseth to yerke, or yerketh out disorderly and out of malice; or the single spurre on that side on which he yerketh out most disorderly; and lastly, a restless holding of him to the lesson, not giuing him any rest or ease till he doe it in that manner which you can will.

Corrections.

Then for his cherishings, they are all those formerly mentioned, being bestowed vpon him in the very instant of his well doing.

Cherishings

When your horse is perfect in all the lessons formerly spoke of, and vnderstandeth the helps and corrections belonging to the same, you shall then teach him to turne readily on both hands, by straitning his large rings, and bringing them into a much lesse compasse: and although amongst horse-men, and in the Art of horsemanship, there are diuers and fundry turnes, some high and loftie, as the turne vpon the *curues*, *caproile*, or on bounds, some close and neere the ground, as the turne *Tërta*, *Terra*, or those wee call, *Caragolo*, *Serpegiare*, and such like, and some swift and flying, as the *miauellare*, *chambetta*, and

Of turning.

such like; yet sith they all labour but to one end, which is to bring an horse to an exact swiftnesse and readinesse in turning, I will in as brieve and plaine manner as I can shew you how to compasse the same. First therefore you shall make out a ring some three or foure yards in compasse, and in the same with all gentleness a while walke your horse, suffering him to goe in the same at his owne pleasure, gathering his head vp by little and little; and making him take pleasure in the same, till you finde that he taketh knowledge of the ring, and will with all willingnesse walke about the same, coueting rather to straiten it, then inlarge it; which perceiued, you shal then carry your bridle-hand constant & somewhat strait, yet the outmost reyne euer somewhat more strait then the inmost, making the horse rather looke from the ring then into the ring, & the calue of your legges (as occasion shall serue) somewhat neere to the outward side of the horse, & then you shall trot him about the ring, first on the one side, and then on the other, making your changes within that strait ring as you did before within the large ring.

And in this sort without ceasing you shall exercise your horse a full houre together, then stop him, make him aduance twice or thrice together, then retire in an euen line, and so stand still a pretty while, and cherish him; then when hee hath taken fresh breath, to him againe, and doe as before, continually labouring by raising vp your bridle-hand, and thrusting forward your legs and body to bring his trot to all the swiftnesse and loftines that may be, and in your changes to do them so readily and roundly as may be also, making him to lap his outmost leg so much ouer his inmost leg, that he may couer it more then a foot ouer, and thus you shall exercise him a whole forenoon, at least a weeke together, only doing

doing his former lessons but once over in a morning and no more; And in this practice you teach him perfectly three lessons together; that is, the turne *Terra, Terra*, the *Incaulare*, and the *Chambetta*, the turne *Terra, Terra*, in the outmost circle of the strait ring, and the *Incaulare* and *Chambetta* in the changes, wherein he is forc't to lap one legge over another, or else to lift vp the inmost legges from the ground whilst he brings the outmost over it: and surely in this ring and these changes consisteth all the maine Art of turning, and the chiefest glory both of the horse and the horse-man; and therefore it is meet for every Rider to thinke this lesson neuer perfectly learnt, and therefore continually to practise his horse in the same, making him not onely tread and trot these narrow rings, but also gallop them, and from gallopping them, to passe them about in ground salts, as by taking vp his fore-legs from the ground both together, and bringing his hinder feete into their place, and so passing the ring about once, twice, or thrice, at your pleasure, or as oft as the horses strength and courage will allow: and this is the true turne called *Terra, Terra*, and of greatest request with horse-men, and likewise with souldiers; and this will every horse naturally and easily be brought vnto, onely by a continuall trotting and gallopping of these narrow rings. Thus you see the perfectnesse of your larger rings brings your horse to an easie vse of the strait rings, and the easie knowledge of the strait rings brings a horse to the perfection of turning, which is the ground and maine summe of this Art, as stopping begets retreating, and retreating advancing. Thus every lesson as it were a chaine is liנק one into another.

The helps belonging to turning are all whatsoever are formerly spoken of, because it is a lesson which besides

Helpes.

that it containeth in it selfe all other lessons, so it must be done with more courage, Art, and nimblenesse, then on my else wharfoerer, and therefore the horse had need of all the assistance that can possibly be given him.

Correcti-
ons.

The corrections are the spurs given out of the outmost side, when the horse sticke, and is harder to come about on the one side, then on the other; and the rod stricken hard on the outmost side of the offending member, as also a continuall labour when the horse shewes either vnwillingnesse or disobedience: touching the vn-
nimblenesse of his turning when hee beates one legge against another, or treads one foot vpon another, the taps and hurts he doth himselfe are sufficient corrections, and will both make him know his fault and amend it.

Cherishings

For his cherishings, they are also the former already spoke of, yet to be vsed (if possible) with greater earnestnesse, in as much as this lesson being most cunning, would for the performance thereof euer receiue the most comfort.

Your horse being brought to this perfection, that hee will perfectly tread his large rings, stop, retire, aduance before, yerke behinde, and turne readily on either hand, you shall then take away his mulsole and trench, and in stead thereof put vpon his head a gentle Cauazan of two ioynts and three peeces, with a chap-band ynderneath, which you shall buckle close, but not strait, and be sure that the cauazan lie vpon the tender grissell of the horses nose, somewhat neerer to the vpper part of his nostrils, then to the chap-band you shall fasten the Martingale, and lastly to the rings on each side the cauazan, you shall fasten long diuided reynes, more then a yard and a halfe in length a peece, then into his mouth you shall put a sweet smooth cannon bit, with a plaine watering chaine, the

the cheek being of large size, so as it may arme a little above the point of his shoulder; and the kibble shall be thicke, round and large, hanging loosely vpon his nether lip, and intising the horse with his lip to play with the same. Thus armed you shall take his backe, and casting the left reine of your cauezan ouer the horses right shoulder, you shall beare it vnder your thumbe, with the reines of the bit in your left hand, and the right reines of the cauezan you shall cast ouer the horses left shoulder, and beare it with your rod in your right hand, and so trot him forth the first morning out-right two or three miles in the high way making him onely feeble and grow acquainted with the bit, and onely making him now and then stop and retire, and gathering vp his head into a due place, and fashioning his reyne with all the beautie and comelineffe that may be, which done, the next day you shall bring him to his large rings, and as was before shewed, there make him perfect with the bit, as you did with the snaffle, first in trotting, then in gallopping of the same; then make him stop, retire, aduance, yerke behind, and turne vpon either hand, with a great deale more perfectnesse, and more grace then was formerly done with the trench, which is an easie labour, in as much as the bit is of much better command, and brings more comelineffe to the horses motions, is also a greater helpe, a sharper correction, and a cherisher of more comfort then any before vsed. And thus in the first moneth you may make any horse perfect vpon the trene in the lessons before spoke of, so in the second moneth you may make the same lessons a great deale more perfect vpon the bit, and so presume in two moneths to haue a perfect ground horse, fit either for Souldier or Schollar, that hath any good rules of horfemanship in him.

Now

Of the turning post.

Now forasmuch as the Art of turning in horses is of great difficultie, and ought of all lessons to be most elaborate, I will speake a little further thereof, and shew you the practise of these present times for the best accomplishment of the same, without stirring vp euill motions in the horse, whence restiuenesse and other vilde errors doe grow; for it is certaine that euery horse naturally desireth neither offence nor to offend; but the rash discretion of ignorant horsemen, which will compell a horse to doe before he know what or how to doe, is the begetting of those euils which are hardly or neuer reclaimed: for a horse is like an ill brought vp boy, who hauing learnt drunkenesse in his youth, will hardly bee sober in his age, and hauing once got a knauish qualitie, though hee be neuer so much corrected for the same, will yet now and then shew that the remembrance is not vterly extinguished: and forasmuch as in this lesson of strait turnes, there is so much curious hardnesse, that a horse is most subiect to rebell, and learne many euils thereby, therefore to preuent all those euils, you shall cause a smooth strong post to be well ramm'd and fixed in the earth in the midst of the strait ring, at the very point and center thereof; then causing a foot-man to stand at the post, you shall giue him the right reine of your cauezan, which you shall make him hold about the post, and so walke or trot your horse about the same on your right hand as long as you please; then taking vp the right reine, giue him the left reine, and doe as much vpon the left hand: and thus change from hand to hand as oft as you shal think conuenient, til you haue brought your horse to the absolute perfection of euery turne, the post being such a guide and bond vnto the horse, that albeit the horseman were of himselfe vterly ignorant, yet

it

it is impossible the horse should either disorder, or disobey his riders purpose.

When your horse can thus perfectly set every severall turne, either strait or open with his bit, you shall then teach him to manage, which is the only posture for the vse of the sword on horse-backe; and you shall doe it in this manner: First, cause some by-stander to pricke vp in the earth two riding rods, about twenty yards, or lesse, as you thinke good, distant one from the other; then walke your horse in a strait turne or ring about, the first on your right hand, and so passing him in an even furrow downe to the other rod, walke about it also in a narrow ring on your left hand, then thrust him into a gentle gallop downe the even furrow, till you come to the first rod, and there making him as it were stop and advance without any pause or intermission of time, thrust him forward againe, and beate the turne *Terra, Terra*, about it on your right hand, then gallop forth-right to the other rod, and in the same manner beate the turne about on your left hand: and thus doe as oft as you shall thinke it conuenient for your owne practice, and the horses strength.

Of managing.

Now of these manages our ancient masters in horsemanship haue made diuers kindes, as manage with rest, and manage without rest; manage with single turnes, and manage with double turnes, which indeede doth rather breed confusion, then vnderstanding in either the horse or horseman: therefore for your better knowledge I will reduce them onely but to two kinds: it is manage open, & manage close: your open manage is that which I shewed you before, when you turne *Terra, Terra*, which is the most open of all strait turnes; and your close manage is when you turne vpon the *incaulatre*, or *chambetta*,

Diuersities of manages.

which are the closest of all turnes, and may be done as before I shewed, in a flying manner, even vpon one foot, which although it be artfull, yet it is not so glorious and safe for the Souldiers practise, onely this you may be most assured of, that when a horse can manage vpon both these turnes, he may manage without more instruction, vpon any other turne whatsoever.

Of the carriere.

When your horse is perfect in the manages before said, you may then passe a carere at your pleasure, which is to run your horse forth right at his full speed, and then making him stop quickly, sodainly, firme and close on his buttocke: in which lesson there needeth little instruction, but onely some few obseruations, as first that you make not your carere too long, whereby the horse may be weakened, nor too short, whereby his true winde and courage may be vndiscovered, but competent and indifferent, as about foure or five score yards at the most; then that you start him gently without affright; and lastly, that you first giue him a little warning with your bridle-hand, and then stop him firmly and strongly; which place of stop if it be a little bending downeward, it is a great deale the better. And thus in these lessons already shewed you, consisteth all the full perfection of a horse for seruice in the warres, which any painfull man may bring his horse well vnto in lesse then three moneths, how euer our ancients in former times haue beene blinded, and in the same practice haue wasted two yeares ere they brought it to perfection.

Horses for pleasure.

Now forasmuch as to the Art of riding belongeth diuers other salts and leapes, right pleasant and curious to behold, and though not generally vsed in the warres, yet not vtterly vselesse for the same, and sith they are many times very needfull for the health of mans body, I will

will by do meanes abridge our Engliſh husbandman of the ſame, but proceed to the leſſons which are meet for horſes of pleaſure, of which the firſt is to make a horſe bound aloft with all his foure feet from the ground; and you ſhall doe it in this manner: when you haue trotted your horſe forth-right a dozen or twenty yards, you ſhall ſtop him, and when he hath aduanced once or twice, you ſhall a little ſtraiten your bridle-hand, and then giue him the euen ſtroke of both your ſpurs together hard, which at firſt will but onely quicken and amaze him, but doing it againe and againe, it will breed other thoughts in him, and he being of ſpirit and mettall (as it is loſt labour to offer to teach a iade ſuch motions) he will preſently gather vp his body, and either riſe little or much from the ground, then preſently cheriſh him, and after ſome reſt offer him the like againe, and thus doe till you haue made him bound twice or thrice: then make much of him, and doe no more for that day: the next day renue his leſſon againe, and double his exerciſe, increaſing ſo day by day till he come to that perfectneſſe, that hee will bound whenſoeuer your ſpurs ſhall command him.

Of bounding aloft.

When your horſe can bound perfectly, then you ſhall teach him the coruet, in this manner: you ſhall at the corner where two walles ioyn together, a little hollow the ground a horſes length or more, and then place a ſmooth ſtrong poſt by the ſide of the hollowneſſe a horſes length likewise from the wall; then ouer againſt the poſt faſten an iron ring in the wall: this done, ride your horſe into the hollow place, and faſten one of the reynes of the cauezan vnto the ring, and the other about the poſt; then after you haue cheriſht your horſe, make him aduance, by the helpe of the calues of your legges

Of the coruet.

onely twice or thrice together ; then let him stand still, and cherish him ; then make him to aduance againe at least a dozen times together ; then rest, and after aduance twenty or forty times together, daily increasing his aduancings as he grows perfect therein, til you perceiue that he hath got such a habit therein, that he will by no meanes presse forward, but keeping his ground certaine, aduance both before and behinde of an equall height, and keepe one iust and certaine time with the motion of your legs, neither doing slower nor faster, but all after one manner and leisure : but if you finde that hee doth not raise his hinder-parts high enough, then you shall cause a foot-man to stand by you, and as you make him aduance before, so the foot-man by ierking him gently vpon the hinder fillets with his rod, to raise vp his hinder parts : also this will bring your horse in few dayes to a perfect and braue coruet, so that after you may doe it any place where you please, without the helpe either of your wall or post, or other by-stander.

Of the gal-
lop galliard.

When your horse is made perfect in the coruet, and that hee will doe it readily and comely, you shall at the end of euery third or fourth aduancing, giue him the stroake of your spurs, and make him bound aloft ; then put him to his coruet againe as before, and then make him bound againe ; and thus at the end of euery third aduancing see you make him bound for the length of a tilt barre, or an ordinary managing furrow, according to the horses strength : and this is called the gallop galliard, which if it be taught a horse along by the side of some wall or smooth pale, it is so much the better, and a great deale fewer disorders will arise and trouble the Rider.

Of the Ca-
priolle.

The next lesson you shall teach your horse after the gallop galliard, is the *capriolle* or goats leape, which is the same.

same manner of motion which the coruet is, onely it is to be done forward, and much ground gained in the salt, and the horse is to raise his hinder parts as high or rather higher then his fore-parts, and to keepe rather a swifter then slower time in doing of it: therefore when you teach your horse to doe it, you shall bring him into some hollow furrow, where the ground is a little descending, and turning his head to the descent, put him into the coruet temperate and gently; then when you giue him the cues of your legs to raise vp his fore-parts, in the same instant ierke your leg violently forward againe, that hee may not sticke, but carry his hinder legges after his fore-legges, and let some skilfull foot-man standing by your side ierke the horse over the fillets with his rod, & make him raise vp his hinder-parts: and thus doe without ceasing, till hee performe your will nimble and cunningly, and then forget not to cherish him and giue him all comfort possible. And this lesson and the other which consist of violent and quicke salts or leapes, would euer be practised the first in the morning whilest a horse is fresh and lusty, for to put him to them after his fire edge is taken away, will but bring him to a loathing of his instruction, or at the best to doe them but slouely, heauily, and unwillingly.

There is also another motion which is pleasing to the eye, though it bee very laboursome to the body, which is to make a horse goe side-long of which hand soeuer the Rider is disposed, and is very necessary in the warres, because it is the auoiding of any blow comming from the enemy. This motion when you intend to teach your horse, you shall draw vp your bridle-hand somewhat strait, and if you determine to haue him goe aside to your right hand, lay your left reyne close to his necke,

Of going
aside.

and the calue of your left legge close to his side, and as you did in the *Incanalare*, make him lap or put his left legge over his right, then turning your rod backward, and ierking him gently on the left hinder thigh, make him bring his hinder parts to the right side also, and stand in an euen line as at the first; then make him remoue his fore-parts more then before, so that hee may stand as it were crosse ouer the euen line, and then make him bring his hinder parts after, and stand in an euen line againe; and thus doe till by long practise hee will moue his fore-parts and hinder parts both together, and goe sidelong as farre as you please; then cherish him: and if you will haue him goe towards your left hand, doe as you did before, vsing all your helpes and corrections on the right side onely. And thus much I thinke is sufficient to haue spoke touching all the seuerall lessons meet to be taught to any horse whatsoever, whether he be for service or for pleasure, and which being performed artfully, carefully, and with patience, you may presume your horse is compleat and perfect, the rather sith no man can finde out any inuention, or teach any other motions to a horse, which may be good and comely, but you shall easily perceiue that they are receiued from some one of these already rehearsed.

Riding before
a
Prince.

Now if you shall be called to ride before a Prince, you must not obserue the libertie of your owne will, but the state of the person before whom you ride, and the grace of the horse which you ride; and therefore being come into the riding place, you shall chuse your ground, so that the person before whom you are to ride may stand in the midst thereof, so as he may well behold both the passage of the horse to him and from him: then being seated in comely order, and euery ornament about you handsome

handsome and decent, you shall put your horse gently forth into a comely trot, and being come against the person of estate, bow your body downe to the Rest of your horse, then raising your selfe againe, passe halfe a score yards beyond him, and there marking out a narrow ring, thrust your horse into a gentle gallop, and giue him two or three managing turnes in as short ground as may be, to shew his nimblenesse and readinesse; then vpon the last turne, his face being towards the great person, stop him comely and close, and make him to aduance twice or thrice; then hauing taken breath, put him into a gallop galliard, and so passe along the length of the euen furrow with that salt, making him do it also round about the ring; then his face being toward the Prince, stop him, and giue him fresh breath, then thrust him into the *caprole*, now and then making him yerke out behinde, yet so as it may be perceiued it is your will, and not the horses malice: and hauing gone about the ring with that salt, and his face brought to looke vpon the Prince, stop him againe and giue him breath; then drawing neerer to the Prince, you shall beat the turne *Terra, Terra*, first in a pretty large compasse, then by small degrees straitning it a little and a little, draw it to the very center where you may giue two or three close flying turnes, and then changing your hands, vndo all that you did before, till you come to the rings first largenesse; then the horses face being direct vpon the Prince, stop him, and put him into a coruet, & in that motion hold him a pretty space, making him doe it first in an euen line, first to the right hand, then to the left, now backward, then forward againe: and thus hauing performed euery motion orderly and comely, bowe downe your body to the Prince, and so depart.

But

Of the Caragolo.

To ride for
recreation.

But if you intend to ride onely for recreation, then you shall marke what lesson your horse is most imperfect in, and with that lesson you shall euer when you ride both begin and end; after it you shall fall to those lessons which are to your selfe most difficult, and by the practice of them bring your selfe to a perfectnesse, then consequently to all other lessons, repeating (as it were) euery one ouer more or lesse, least want of vse breed forgetfulnesse, and forgetfulnesse vnto ignorance: but if your recreation in riding be tyed to any speciall rules of health, and that your practice therein proceede more from the commandement of your Physitian then your pleasure, then I would wish you in the morning first to begin with a stirring or rough lesson, as the gallop galliard, bounding, or such like, which hauing a little stirred your bloud, and made it warme, you shall then calme it againe with a gentle manage; or the galloping of large rings; then to stirre your spirits againe, to bring the stone downe, or procure appetite, passe into the *capriole* or coruet; and then to make quiet those moued parts, set the turne called *Terra, Terra*, the *incanalaire* and such like.

And thus one while stirring your bloud, and another while moderately allaying such stirring, you shall giue your body that due and proper exercise which is most fit for health and long life. Many other wayes this recreation may be vsed for the good of a mans body, which because particular infirmities must giue particular rules how and when to vse it, I will at this time speake no further thereof, but referre the exercise to their owne pleasures which shall practise the same, and to the good they shall finde in the practice.

CHAP. III.

Of the breeding of all sorts of Horses fit for the Husbandmans use.

THe mindes of men being swaied with many various motions, take delight sometimes to be recreated rather with contemplatiue delights then with actiue pleasures; and there is strong reason therefore, because disability of body, or affaires of the kingdome or Common-wealth, may take a man from those pre-occupations, which otherwise might stirre him to more labourious exercise: and of these contemplatiue recreations, I can preferre none before that gentlemanly and beneficiall delight of breeding creatures meete for the vse of man, and the good of the Common-wealth wherein he liueth, and of these breedings I cannot esteeme any so excellent as the breeding of horses, both for the pleasure wee gaine thereby in our owne particular seruice, and also for the strength, defence, and tillage of the kingdome.

He therfore that suteth his recreation to the breeding of horses, must first haue respect vnto the ground whereon he liueth or enioyeth; for euery ground is not meete to breed on, but some too good, some too bad; some too good, because they may be exhausted to a more beneficiall commodity, horses hauing a world of casualties attending on them, and many yeares before the true profite doth arise; and some too bad, because the extreame barrenesse of the same will denie competent nourishment to the thing bred, and so to the losse of time and profit adde mortality.

The grounds then meete to breede horses on, would neither be extreame fruitfull, nor extreame barraine, but

The breeding of Horses.

Grounds to breede on.

H

of

of an indifferent mixture, yeelding rather a short sweet burthen, then a long, rich and fruitfull ; it would rather lie high then low, but howsoever firme and hard vnder the foote ; it would bee full of Mole-hils, vneuen treadings, hils, and much cragginesse, to bring colts to nimblenesse of foote ; it would haue good store of fresh waters, an open sharpe aire, and some conuenient couert ; and this ground is best if it be seuerall and inclosed, yet may be bred vpon though it bee open and in common, onely some more carefulnesse to bee looked for, a little before, and in the time of foaling. Nay, the grounds which are neither seuerall nor common, are very good also to breed on, and those be your reathering grounds, which we call particular grounds ; for though they bee proper commonly to one man, yet they are not diuided nor eaten otherwise then at the owners pleasure : and these reathering grounds are as good as any grounds for the first nourishing of a foale, if they be amongst Corne grounds, or any graine except pease onely.

Diuision of
grounds.

If you haue much ground to breede on, you shall diuide it into many pastures, the least and barrenest for your Stallion to runne with your Mares in, those which haue least danger of waters in for your Mares to foale in, the fruitfulest and of best growth for your Mares to giue milke in, and the most spacious and vneuenest to bring vp your colts in after they are weaned.

Choice of
Stallion, &
which best.

For the choice of a good Stallion, and which is best for our kingdome, opinion swayeth so farre, that a man can hardly giue well-receiued directions : yet surely if men will be ruled by the truth of experience, the best Stallion to beget horses for the warres is the *Courser*, the *Jennet*, or the *Turke* ; the best for coursing & running is the *Barbary* ; the best for hunting is the *Bastard courser*, begot

begot of the *English*; the best for the Coach is the *Flemish*; the best for trauell or burthen is the *English*, and the best for ease is the *Irish-hobby*.

For the choyce of Mares you shall greatly respect their shapes and mettals, especially that they bee beautifully fore-handed, for they giue much goodnesse to their foales: and for their kindes, any of the *Races* before spoken of is very good, or any of them mixt with our true *English Races*, as *Bastard-courser Mare*, *Bastard-Lennes*, *Bastard-Turke*, *Barbary*, &c.

Choice of
Mares.

The best time to put your Stallion & Mares together is in the beginning of March, if you haue any grasse, as you should haue great care for that purpose, and one foale falling in March is worth two falling in May, because he possesseth, as it were, two winters in a yeare, and is therby so hardned, that nothing can (almost) after impair him; and the best time to take your horse from the Mares againe is at the end of Aprill, in which you shall note, that from the beginning of March till the beginning of May, you may at any time put your Stallions to your Mares, and a moneths continuance is euer sufficient; provided euer, as neere as you can, that you put them together in the increase of the Moone; for foales got in the wane are not accounted strong or healthfull.

When to
put them
together.

For couering of Mares, it is to bee done two wayes, out of hand, or in hand; out of hand, as when the horse and Mares run together abroad, as is before said, or turned loose into some empty barne for three nights one after another, which is the surest and the safest way for a Mares holding; or in hand, early in a morning, and late at an euening two or three daies together, when you bring the horse to the Mare, and make him couer her once or twice at a time, holding him fast in your hand,

Of couering
Mares.

and when the act is done, leade him backe to the stable; and in this act you shall euer obserue, as soone as the horse commeth from her backe, presently to cast a pail of cold water on her hinder-parts, or else to chase her swiftly vp and downe, for feare by standing still shee cast out the seed, which is very ordinary.

To know
if a Mare
hold.

To know whether your Mare hold to the horse or no there bee diuers wayes, of which the best is by offering her the horse againe at the next increase of the Moone, which if she willingly receiue, it is a signe shee held not before; but if shee refuse, then it is most certaine shee is sped; or if you poure a spoonfull of cold vinegar into her eare, if shee shake onely her head, it is a signe shee holds, but if she shake head, body and all, then truly it is a signe that she doth not hold: lastly, if after shee is couered you see her scoure, her coat grow smoothe and shining, and that shee doth (as it were) renue and increase in liking, then it is a signe she holds; but if shee hold at a stay without any amendment, then offer the horse again, for she is not serued.

To con-
ceiue male-
foales.

To make your Mares conceiue most male-foales, you shall bee sure to keepe your Stallion proud, and your Mare poore, that his lust mastering hers, hee may onely be predominant and chiefe in the action: many other rules fancie deuise, but they erre in their ends, and I would by no meanes haue this discourse capable of any vncertainty.

To pro-
voke lust.

If you haue any aduantage giuen you by friendship, or otherwise, whereby you may haue a Mare at the present very well couered, onely yours is not yet ready for the horse, you shall in this case to prouoke lust in her, giue her to drinke good store of clarified hony and new milke mixt together, and then with a bush of nettles all

to

to nettle her priuy parts, and then immediately offer her the horse.

To keepe your Mares from barrenesse, and to make them euer apt to conceiue foales, you shall by no meanes feed them too extreame far, but keepe them in a middle state of body, by moderate labour, for the leaner they are when they come to take the horse, the much better they will conceiue.

To keepe
Mares from
barrenesse.

After your Mares haue beene couered, and that you perceiue in them the markes of conceiuing, you shall let them rest three weekes or a moneth, that the substance may knit; then after moderately labour or trauell them, till you see them spring, and then turne them abroad, and let them run till they foale; for to house them after is dangerous and vnwholesome.

Ordering
Mares after
couering.

If your Mare be hard of foaling, or will not cleanse after she hath foaled, you shall take a pint of running water, wherein good store of Fennell hath beene boiled, and as much strong, old, sweet wine, with a fourth part of the best sallet oile, and hauing mixt them well together, being but luke-warme, poure it into her nostrils, and then hold and stop them close, that she may straine her whole body, and it will presently giue her ease.

A helpe for
Mares in
foaling.

As soone as your Mare hath foald, you shall remoue her into the best grasse you haue, which is fresh and vnsoiled, to make her milke spring; and if it be early in the yeare, you shall haue care that there be good shelter in the same, and there let her nourish her foale most part of the Summer following.

Ordering
Mares after
foaling.

As touching the weaning of foales, though some vse to weane them at *Michaelmas*, or *Martilmas* following, out of a supposition that the winter milke is not good or wholesome, yet they are much deceiued; and if you can

Weaning of
foales.

by any conuenient meanes (sauing greater losses) let your foales run with their Dammes the whole yeare, even till they foale againe; for it will keepe the foale better in health, in more lust, and lesse subiect to tendernesse.

Ordering
after the
weaning.

When you intend to weane your foales, you shall take them from their Dammes ouer-night, and driue them into some empty house where they may rest, and the Mares be free from their noses: then on the morning following giue to euery foale fasting a branch or two of Saueu annointed or rould in butter, and then hauing fasted two houres after, giue them a little meate, as grasse, hay, or garbadge of Corne, with some cleare water, and doe thus three dayes together; then seeing that they haue forgotten their Dammes, geld such colt-foales as you intend to make Geldings of; and after their swellings are past, put them with your other colt-foales into a pasture provided for them by themselves, and your filly-foales into another by themselves; which pastures may either be high woods, commons, carres, or such like spacious pieces of ground, where they may run till they be ready for the saddle.

Gelding of
Colts.

Now, albeit I proportion vnto you this manner of gelding of foales, yet I would haue you know that the best & safest way to geld them is, if it may be, vnder the Damme when they sucke, as at nine or at fifteene daies of age, if the stones appeare, or else so soone as you can by any meanes perceiue them fall downe into the cod, for then there will be no danger of swelling, or other mischiefes which commonly attend the action. And thus much touching the breeding of horses, and the obseruations due to the same through all the courses and passages thereof, as hath beene found by ancient practice and experience.

CHAP. III.

Of Horses for tranell, and how to make them amble.

THe Husbandman, whose occupation is the generall affaires of the Common-wealth, as some to the Markets, some to the Citie, and some to the seats of Iustice, must necessarily be imployed almost in continuall tranell: and therefore it is meet that hee be provided euer of a good and easie travelling horse.

The markes whereby he shall chuse a good travelling horse, are these: he shall be of good colour and shape, leane headed, and round foreheaded, a full eye, open nostrill, wide iawed, loose thropled, deepe neckt, thinnestred, broad breast, flat chinde, out ribd, cleane limbd, short ioynted, strong hooued, well mettald, neither fiery, nor crauing, strong in euery member, and easie to mount and get vp vpon; he shall follow without haling, and stand still when he is restrained.

The markes
of a good
travelling
horse.

Now forasmuch as there are a world of good horses, which are not easie, and a world of easie horses which are not good, you shall by these directions following make any horse amble whatsoener: first then you shall vnderstand that practise hath made diuers men beleue that diuers wayes they can make a horse amble, as by gagging them in the mouthes, by toiling them in deepe earth, by the helpe of shooes, by gallopping and tiring, or such like, all which are ill and imperfect: yet the truth is, there is but one certaine and true way to compasse it, and that is to make a strong garth webbe, flat and well quilted with cotton, foure pasternes for the sma's of his fore-legs, vnder his knees, and for the smals of his hinder legges somewhat below the spauin ioynts: to these pasternes you shall fixe strong straps of leather, with good iron

To make a
horse amble

Diuers
wayes of
ambling.

Of traue-
ling.

Of wif-
ping.

Helpes in
ambling.

iron buckles, to make shorter or longer at pleasure; and hauing plac't them about his foure legges, you shall take two seuerall round roapes, of an easie twist, made with strong loopes at either end, and not aboue eight handfuls in length: and these the horse standing in a true proportion, you shall fasten to the foure straps of leather, to wit, one of them to his neere fore-legge and his neere hinder legge, and the other to his farre fore-legge and his farre hinder-legge, which is cald amongst horse-men traueilling: with these you shall let him walke in some inclosed piece of ground, till he can so perfectly goe in the same, that when at any time you offer to chase him, you may see him amble truly and swiftly: then you shall take his backe, and ride him with the same tramels, at least three or foure times a day, till you finde that he is so perfect, that no way can be so rough and vneuen, as to compell him to alter his stroke, or goe vnnimble. This done, you may first take away one tramell, then after the other, and onely wreath about vnder his foure fet-locks thicke and heauy great rolds of hay or straw-ropes, and so ride him with the same a good space after, for it will make him amble easie; then cut them away, and ride and exercise him without any thing but the ordinary helpe of the bridles, and there is no doubt but hee will keepe his pace to your full contentment and pleasure.

Now during this time of your teaching, if your horse strike not a large stroke & over-reach enough, then you shall make the trammell the straiter; but if he over-reach too much, then you shall giue it more liberty: and herein you shall finde that an inch straitning, or an inch enlarging, will adde or abate at least halfe a foote in his full and direct stroke. And thus much touching the teaching of any horse to amble, of what nature or qualitie soeuer
hee

hee bee, or how vnapt or vntoward fouer to learne.

CHAP. V.

Of the ordering and dieting of the hunting Horse.

SOME loue hunting for the exercife of their owne bod-
dies, some for the chafe they hunt, some for the run-
ning of the hounds, and some for the training of their
horses, whereby they may finde the excellencie of their
goodnesse and indurance: to him therefore which pla-
ceth his delight in the goodnesse of his horse, I would wish
him thus to order and diet him, and hee shall most assu-
redly come to the true knowledge of the best worth
which is within him; and if in these rules which I now
shew, I be lesse curious then formerly I haue beene, let no
man wonder thereat, but know that Time (which is the
mother of experience) doth in our labours shew vs more
new and more neerer wayes to our ends, then at the first
we conceiued: and though when I first practiced this
Art, I knew not how to bring a very fat horse from *Micha-
elmas* till *Christmas* to shew his vtmost perfection, I
know now in one first moneth (though neuer so foule)
how to make him fit for any wager, daring now boldly
to aduenture on that, with which before I thought al-
most present death to offer: thus doth obseruation and la-
bour finde out the darkest secrets in Art.

To beginne then with the first ordering of a hunting
horse, you shall know that the best time to take him from
grasse is about *Bartholomew-tide*, the day being faire, dry,
and pleasant; and as soone as he is taken vp, to let him
stand all that night in any vast house to empty his bo-
die; the next day stable him, and giue him wheat straw
if you please, but no longer in any wise; for though the
olde rule is to take vp horses bellies with straw, yet it

Taking vp
of the hun-
ting horse.

straitneth the guts, heats the liuer, and hurteth the winde: therefore let onely moderate exercise, as riding him forth to water morning and euening, and other airings, doe what you expect straw should; and for his food, let it be hay that is sweet, though rough, and either old, or at least well sweat in the mowe.

Cloathing
the horse.

After his belly is emptied, you shall cloath him first with a single cloath, whilest the heate endureth, and after with more, as you shall see occasion require; and when you beginne to cloath the horse, then you shall dresse, curry, and rub him also. Now forasmuch as it is a rule with ignorant horse-men, that if they haue but the name of keeping a hunting-horse, they will with all care (without any reason) lay many cloathes upon him, as if it were a speciall physicke; you shall know they are much deceiued therein, and may sooner doe hurt then good with multiplicity of cloathes: therefore to cloath a horse right, cloath him according to the weather, and the temper of his body; as thus, if you see your horse be slight, smooth and well-coloured, then cloath him temperately, as with a single cloth, of canuase or sack-cloth at the most; and if then as the yeare growes colder, you finde his haire rise or stare about his necke, flanks, or outward parts, then you shall adde too a woollen cloath, or more if neede require, till his haire fall smooth againe, holding it for your rule, that a rough coat shews want of cloaths, and a smooth coat, cloathing enough: yet if your horse haue beene cleane fed, taken exercise sufficient, and hath not much glut within him, if then you finde that in the night he sweeteth in his cloathes, then it is a signe hee is ouer-fed; but if he be foule inwardly, or hath not sweat formerly, and now sweats comming to good feeding, then you shall augment rather then diminish any cloathing;

thing; for his foulness but then breaketh out, and being evacuated, he will come to driness of body againe, and so continue all the yeare after: and surely for an ordinary proportion of cloathes, I hold a Cambrase cloth and a cloth of House-wives wollen to be at full sufficient for a hunting-horse.

A hunting-horse would bee drest in his dayes of rest twice a day, that is, before hee goe to his morning watering, and before he goe to his evening watering: for the manner of his dressing, after hee is vncloathed, you shall first curry him from the tips of the eare to the setting on of his taile, all his whole body most entirely ouer with an iron combe, his legs vnder the knees and cambrels onely excepted; then you shall dust him, then curry him againe all ouer with a round brush of bristles, then dust him the second time, then rubbe all the loose haire away with your hands wet in cleane water, and so rub till the horse be as dry as at the first, then rubbe all his body and limbes ouer with an haire-cloth: lastly, rubbe him ouer with a fine white linnen rubber, then picke his eyes, nostrils, sheath, cods, tuell, and feet very cleane, and so cloath him, and stop him round with wispes, if you water within the house, otherwise saddle him after his body is wrapt about in a woollen cloth, and so ride him forth to the water.

The best water for a hunting horse, is either a running river, or a cleare spring, remote from the stable a mile, or a mile and a halfe at most, and neere vnto some plaine prece of ground, where you may scope and gallop after he hath drunke; and as soone as you bring your horse to the water, let him take his full draught without trouble or interruption; then gallop and scope him vp and downe a little, and so bring him to the water againe, and

Of dressing
the hunting
horse.

Of watering
the hunting
horse.

let him drinke what he please; and then gallop him againe; and thus doe till you finde he will drinke no more; then hauing scop't him a little, walke him with all gentleness home, and there cloath him vp, stoppe him round with great soft wispes, and so let him stand an houre vp on his bridle, and then feed him.

Of feeding
the hunting
horses.

To speake first of the foode for hunting horses, the most ordinary is good sweet sound oats, either thoroughly dried with age, or else on the kilne; and if your horse be either low of flesh, or not of perfect stomach, if to two parts of those oates you adde a third part of cleane olde beanes, it shall be very good and wholesome; and if your horse be in diet for a match, and haue lost his stomacke, if then you cause those beanes to be spelted vpon a milne, and so mixt with oates it will recouer him. The next food, which is somewhat stronger and better, is bread thus made: Take two bushels of good cleane beanes, and one bushell of wheat, and grinde them together; then through a fine raunge bolt out the quantity of two peckes of pure meale, and bake it in two or three loaves by it selfe, and the rest sift through a meale sieue, and knead it with water and good store of barme, and so bake it in great loaves, and with the courser bread feede your horse in his rest, and with the finer against the daies of sore labour. Now for the houres of his feeding, it shall bee in the morning after his comming from water, an houre after high noone, after his comming from his evening water, and at nine or ten of the clocke at night vpon the dayes of his rest, but vpon the dayes of his exercise, two houres after he is thoroughly cold inwardly and outwardly, and then after according to the houres before mentioned. Lastly, for the proportion of foode, you shall keepe no certaine quantity, but according to the
horses

horses stomacke, that is to say, you shall feede him by a little at once, so long as he eates with a good appetite, but when hee begins to trifle or fumble with his meate, then to giue him no more. Now for his hay, you shall see that it be dry short vplandish hay, and so it be sweet, respect not how course or rough it is, sith it is more to scour his teeth and coole his stomacke, then for any nourishment expected from it.

Touching the horses exercise, which is only in the following of the hounds, you shall be sure to traine him after those which are most swift and speedy, for so you shall know the truth, and not bee deceiued in your opinion. Touching the dayes, it shall be twice a weeke at least, but most commonly thrice. As for the quantity of his exercise, it must be according to his foulness or cleanness; for if he be very foule, you must then exercise moderately to breake his grease; if halfe foule, halfe cleane, then somewhat more to melt his grease; and if altogether cleane, then you may take what you please of him (provided that you doe nothing to discourage his spirits, to abate his mettall, or to lame his limbes) and after euery days exercise be assured to giue him either the same night or the next day following, something by way of scouring or otherwise, to take away the grease formerly melted, by meanes whereof you shall bee ever sure to keepe your horse in all good health and perfection.

The best and most excellent way to scour or purge your horse from all grease, glut or filthinesse within his body, which is a secret hitherto was neuer either sufficiently taught, or perfectly learned, is to take of Anise-seeds three ounces, of Cummine-seeds sixe drammes, of Carthamus a dramme and a halfe, of Fennegreke-seede one ounce two drammes, of Brimstone one ounce and a

The exercise
of the horse.

The scour-
ring of the
horse.

halfe, beat all these to a fine powder, and searfe them; then take of salter oyle a pinte and two ounces, of hony a pound and a halfe, and of white wine foure pints, then with as much fine white meale as will suffice, make all into a strong stiffe paste, and kneade and worke it well: this paste keepe in a cleane cloth, for it will last long, and after your horse hath bene hunted, and is at night or in the morning exceeding thirstie, take a ball thereof as much as a mans fist, and wash and dissolue it in a gallon or two of cold water, and it will make the water looke white like milke; then offer it the horse to drinke in the darke, least the colour displease him; if he drinke it, then feede him; but if he refuse to drinke it, yet care not, but let him fast without drinke till he take it, which assuredly he will doe in twice or thrice offering, and after once hee hath taken it, be then assured hee will forsake any other drinke for it: of this drinke your horse can neuer take too much, nor too oft, if he haue exercise; otherwise it feeds too sore. For all inward infirmities whatsoever it is a present remedy: therefore I would not wish any horseman of vertue at any time to be without it; and being once made, it will last three or foure moneths at least.

Ordering a
horse after
exercise.

After your horse hath bene exercised either with hunting, running, trame-sents, or otherwise, you shall euer coole him well in the field before you bring him home; but being come to the stable, you shall neither wash nor walke, but instantly house him; give him store of fresh litter, and rub him therewith, and with dry cloathes; till there be not a wet haire about him, then cloath him with his ordinary cloathes, and wispe him round; then cast another spare cloth ouer him, which you may bate at your pleasure, and so let him stand till it be time to feede him. And thus you may keepe any hunting horse either
for

for match or otherwise, in as good state and strength as any horse-man in this Kingdome, though he exceed you farre both in reputation and experience.

CHAPTER VI.

Of the ordering and dyeting of the running horse

IF any Husbandman haue his minde taken vp onely with the delight of running horless which is a noble sport, and though not of so long indurance, yet equall with any before spoke of, he shall for the bettering of his knowledge giue to his memory these few rules following, by which he shall rightly order and dyet him.

First, for his taking vp from grasse (for there for order sake we must first begin) it shall be at the same time of the yeare, and after the same manner that you took vp your hunting horse, and till you haue enseamed him, hardned his flesh, taken away his inward grease, and brought him to a good perfectnesse of winde, you shall clothe him, dresse him, water him, feed him, exercise him, purge him, and order him after labour, in all points and all things as you did your hunting horse.

When he is thus cleane of body and winde, you shall then lay on him some more cloathes then you did on your hunting horse, to purge his body a little the more, and to make him the more apt to sweat, and euacuate humours as they shall grow: the ordinary quantitie whereof would be a warme narrow woollen cloth about his body, on either side his heart; then a faire white sheet, a woollen cloth about it, and a canuase cloth or two above it, and before his breast a woollen cloth at least two double: he would continually stand vpon cleane litter, and haue his stable very darke and perfumed with Iuniper, when as the strength of his dung shall annoy it.

For

Of dressing
him.

For his dressing, it shall be in all points done as you did to your hunting horse, onely to dresse him once a day is sufficient, and that euer in the after-noone: but for rubbing his limbes or body with dry cloathes or wispes, you shall doe that as often as you come into the stable, provided that you turne but his cloathes vp, but not take them from his body.

Of water-
ing him.

You shall water your running horse as you watered your hunting horse, and giue him the same exercise after it, onely you shall not bring him into the stable of at least an houre or more after he is watered.

Of feeding
him.

The best foodes for your running horse, is either good sweet oates well dried, sunned and beaten, or bread made of two parts wheate, and but one part beanes, and boulded and sifted, and knodden, as was before shewed: onely if you adde to your better sort of bread the whites of twenty or thirty egges, and with the barme a little ale also, it will be much the better; for you shall not respect how little water you vse at all: the houres you feed in, and the quantitie of the food shall be the same, and in the same manner as was mentioned before for the hunting horse, yet with these obseruations, that if your horse be very leane, sickely, and a weake stomacke, that then you may as before is shewed, giue him with his oats a few spilted beanes, or else wash his oats in a little strong ale or beere, or in the whites of a couple of egges.

Of his ex-
ercise by
ayring.

Touchiug his exercise, it consisteth in two kindes, the one ayring, the other courting: Ayring is a moderate and gentle exercise, which you shall vse morning and evening, by riding or leading your horse a foot pace (but riding is better, and lesse in danger of cold) in the morning after his water vp to the hills, and in the evening after his water by the riuers side, by the space of an houre

or two together; and before you leade him forth to ayre, you ſhall be ſure to giue him a rere egge broken into his mouth, as ſoone as his bridle is put on, for it will increaſe winde: and this aying you ſhall by no means forbear, but vpon his dayes of purging or ſweating, or when it much raineth, for then to ayre is vnwholeſome. Againe, if your horſe be very fat, you ſhall aire before Sunne riſe, and after Sunne ſet; but if he be leane, then you ſhall let him haue all the ſtrength and comfort of the Sunne you can deuife; and during this airing, you ſhall be ſure that your horſe be cloathed very warme, eſpecially before the breaſt, and on each ſide the heart, for cold to a running horſe is mortall.

You ſhall courſe your horſe according to his ſtrength and abilitie of body, that is to ſay, twice a weeke, thrice, or as oft as you ſee cauſe, and you ſhall courſe him ſometimes in his cloathes to make him ſweat, and conſume greaſe, and that muſt be done moderately and gently; and ſometimes without his cloth, to increaſe winde; and that ſhall be done ſharply and ſwiftly: you ſhall by keeping your horſe faſting the night before, be ſure that his body be empty before he doe courſe: to waſh his tongue and noſtrils with vinegar, or to piſſe in his mouth ere you take his backe, is very wholeſome: you ſhall leade him in your hand well and warme cloathed to the courſe, and there vncloath him, and rub his limbes well: then having courſt him, after a little breath-taking cloath him againe, and ſo ride him home, there rub him thoroughly, and let him ſtand till he be fully cold, which perceined, let his firſt meate you giue him, be a handfull or two of the eares of pollard wheat: then after, his ordinary food as aforeſaid.

Exerciſe by
courſing.

There is alſo another exerciſe for your running horſe, Of Sweats,
K which

which is, sweats in his cloathes, either abroad or in the house : for sweats in his cloathes abroad, they are those which are taken vpon the course, and are formerly spoke of, that they must bee giuen by a moderate gallopping, no maine running, and as soone as your horse hath past ouer his course, and is in a high sweat, you shall instantly haue him home, and there lay more cloathes vpon him, and keepe him stirring till hee haue sweat so in the stable an houre or more ; then abate his cloathes by little and little, till hee be perfectly cooled and dried, which you must further by rubbing him continually with drie cloathes, and by laying drie cloathes on, and taking the wet away : but for sweats in his cloathes, without any exercise abroad, you shall giue them either when the weather is so much vnseasonable, that you cannot goe forth, or when your horse is so much in danger of lamenesse, that you dare not straine him ; and you shall doe it thus : first take a blanket folded and warmed very hot, and wrap it about his body ; then ouer it lay two or three more, and wispe them round ; then ouer them as many couerlids, and pin them fast and close ; then make the horse stirre vp and downe in the stable till he beginne to sweat, then lay on more cloathes, and as the sweat tricketh downe his face, so rub it away with drie cloathes till he haue sweat sufficiently ; then (as before is shewed) abate the cloathes by little and little, and rub him in euery part till he be as dry as at first.

Of scouring
him.

After euery course or sweat, you shall scour or purge your horse in the same manner, and with the same medicine that you did your hunting horse ; for it is the best that can by Art be inuented, being both a purge and a restorative, cleansing and comforting all the parts of a horses body : but if you thinke it purgeth not enough, then

then you shall take twenty Raisins of the Sunne, the stones pickt out, and ten Figs slit in the midst, boile them in a pottle of faire running water, till it come to be thicke, then mixe it with powder of Liquorice, Annise-seeds, & Sugar-candie, till it come to a stiffe paste, then make pretty round balles thereof, and roule them vp in butter, and giue your horse three or foure of them the next morning after his sweat or course, and ride him an houre after, and then set him vp warme.

After your horse hath beene courted or sweat, and is as before said, cold and drie, you shall then vnbridle him, giue him some few wheat eares, and then at an houre or two after, a little of a very sweet mash, then some bread, after which at his due houre dresse him, and giue him when you finde him thirsty some cold water, with a ball of your leauen dissolued into it, and so let him stand till you feede him for all night.

Ordering
after exercise.

Course not your horse sore for at least foure or five dayes before you run your match, least the sorenesse of his limbes abate him of his speede.

Generall
rules for a
running
horse.

Except your horse be a very foule feeder, muzzle him not aboue two or three nights before his match, and the night before his bloody courses.

Giue your horse as well his gentle courses as his sharp courses vpon the race he must run, that he may as well finde comfort as displeasure thereon.

In training of your horse, obserue not the number of the miles, but the labour fit for your horse.

Be sure vpon the match day that your horse be empty, and that hee take his rest vntroubled till you prepare to leade him forth.

Shooe your horse euer a day before you run him, that the paine of the hammers knocks may be out of his feet.

Saddle your horse on the race day in the stable before you leade him forth, and fixe both the pannell and the girths to his backe and sides with Shooe-makers waxe, to preuent all dangers.

Leade your horse to his course with all gentlenesse, and giue him leaue to smell to other horses dung, that thereby he may be inticed to stale and empty his body as he goes.

When you come to the place where you must start, first rub his limbs well, then vncloath him, then take his backe, and the word giuen, start him with all gentlenesse and quietnesse that may be, least doing any thing rashly you happen to choake him in his owne winde.

And thus much for the ordering and dieting of the running horse, and the particularities belonging to the same.

Generall
rules for a
trauelling
horse.

Now for our husbandmans trauelling horse, which is to carry him in his iournies and about his necessary businesse in the Country, he shall first feede him with the best sweet hay, drie oates, or drie beanes and oates mixt together: in his trauell hee shall feede him according to his stomacke, more or lesse, and in his rest at a certaine proportion, as halfe a pecke at each watering, is vtterly sufficient.

In your trauell feede your horse early, that hee may take his rest soone.

In trauell by no meanes wash nor walke your horse, but be sure to rub him cleane.

Water him a mile before you come to your Inne, or more, as shall lie in your iourney; or if you faile thereof, forbear it till next morning, for water hath often done hurt, want of water neuer did any.

Let your horse neither eate nor drinke when hee is
extreame

extreame hot, for both are vnwholefome.

When the dayes are extreame hot, labour your horse morning and euening, and forbear high-noone.

Take not your saddle off sodainly, but at leisure, and laying on the cloth, set on the saddle again till he be cold.

Litter your horse deepe, and in the dayes of his rest let it lie also vnder him.

Dresse your horse twice a day when hee rests, and once when he trauels.

If the horse be stoned, let him goe to soile, and be purged with grasse in May; a moneth is time long enough, and that grasse which growes in Orchards vnder trees is best.

Let bloud Spring and Fall, for they are the best times to prevent sickneses.

In your iournyng light at every steepe hill, for it is a great refreshing and comfort to your horse.

Before you sleepe every night in your iourney, see all your horses feet stopt with Oxe dung, for it taketh away the heat of trauell and surbating.

Many other necessary rules there are, but so depending vpon these already shewed, that who so keepeth them, shall not be ignorant of any of the rest, for they differ more in name then nature.

CHAP. VII.

How to cure all generall inward sickneses which trouble the whole body: of Feuers of all sorts, Plagues, Infections, and such like.

Sickneses in generall are of two kindes, one offending the whole body, the other a particular member; the first hidden and not visible, the other apparant and knowne by his outward demonstration. Of the first then,

which offendeth the whole body, are Feauers of all sorts, as the Quotidian, the Tertian, the Quartan, the Continuall, the Hittique, the Feauer in Autumne, in Summer, or in Winter, the Feauer by surfet, Feauer pestilent, Feauer accidentall, or the generall plague. They are all knowne by these signes; much trembling, panting and sweating, a fullen countenance that was woont to bee cheerefull, hot breath, faintnesse in labour, decay of stomacke, and costiuenesse in the body: any, or all of which when you perceiue, first let the horse bloud, and after giue him this drinke: Take of *Selladine*, roots and leanes and all, a good handfull, as much *Wormewood*, & as much *Rew*, wash them well, and then bruise them in a Morter, which done, boyle them in a quart of Ale well, then straine them, and adde to the liquor halfe a pound of sweet butter; then being but luke-warme, giue it the horse to drinke.

The cure.

CHAP. VIII.

Of the Head-ach, Frenzie, or Staggers.

THE signes to know these diseases, which indeed are all of one nature, and worke all one effect of mortality, are hanging downe of the head, watric eyes, rage and reeling: and the cure is, to let the horse bloud in the neck three mornings together, and euery morning to take a great quantity; then after each mornings bloud-letting, to giue the horse this drinke: Take a quart of Ale, and boyle it with a big white-bread crust, then take it from the fire, and dissolue three or foure spoonesful of honey into it, then luke warme giue it the horse to drinke, and couer his temples ouer with a plaister of pitch, & keepe his head exceeding warme; let his meate be little, and his stable darke.

The cure.

CHAP. IX.

Of the sleeping Euill.

THe sleeping Euill or Lethargie in horses proceeds from cold, flemie, moist humours, which binde vp the vitall parts, and makes them dull and heavy: the signes are, continuall sleeping, or desire therunto. The cure is, to keepe him much waking, and twice in one weeke to giue him as much sweet Sope (in nature of a pill) as a Ducks egge, and then after giue him to drinke a little new milke and hony.

The Cure.

CHAP. X.

Of the Falling-euill, Planet-strooke, Night-Mare, or Palsey.

Though these diseases haue severall faces, and looke as though there were much difference betweene them, yet they are in nature all one, and proceed all from one offence, which is onely cold flegmaticke humours, ingendred about the braine, and benumbing the senses, weakning the members, sometimes causing a horse to fall downe, and then it is called the Falling-euill: Sometimes weakning but one member onely, then it is called Planet-strooke: sometimes oppressing a horses stomacke, and making him sweat in his sleepe, and then it is called the Night-Mare: and sometimes spoiling an especial member, by some strange contraction, and then it is called a Palsey. The cure for any of these infirmities, is to giue the horse this purging pill: Take of Tarre three spoonfulls, of sweet butter the like quantitie, beat them well together with the powder of Liquorice, Annise-seedes, and Sugar-candy, till it be like paste, then make it into three round balles, and put into each ball two or three cloues of Garlick, and so giue them vnto the horse, obseruing to warme him both before & after, and keepe him fasting two or three houres likewise both before and after.

The Cure.

CHAP.

CHAP. XI.

Of the generall Crampe, or Convulsion of Sinewes.

The Cure.

CRamps are taken to be the contracting or drawing together of the Sinewes of any one member: but Convulsions are when the whole body, from the setting on of the head to the extreamest parts, are generally contracted and stified. The cure of either is, first to chase and rub the member contracted with Vinegar and common Oyle, and then to wrap it all over with wet Hay or rotten Litter, or else with wet woollen cloathes, either of which is a present remedy.

CHAP. XII.

Of any Cold or Cough whatsoever, wet or drie, or for any Consumption or putrifaction of the Lungs whatsoever.

The Cure.

ACold is got by vnaturall heats, and too sodaine coolings, and these colds ingender Coughs, & those Coughs putrifaction or rottennesse of the lungs. The cure therefore for them all in generall, is to take a handfull or two of the white and greenish mosse which growes vpon an old Oake pole, or any old Oake wood: and boile it in a quart of milke till it be thicke, and being cold turned to Jelly, then straine it, and give it the horse luke-warme euery morning till his cough end.

CHAP. XIII.

Of the running Glanders, or mourning of the Chine.

TAke of *Auripigmentum* two drammes, of *Tussilaginis* made into powder as much, then mixing them together with Turpentine till they be like past, and making thereof little cakes, drie them before the fire: then take a Chafing-dish and coales, and laying one or two of the cakes thereon, couer them with a Tunnell, & then the smoake rising, put the Tunnell into the horses nostrils, and let the smoake goe vp into his head; which done,

ride

ride the horse till he sweat: doe thus once euery morning before hee be watered, till the running at his nostrils cease, and the kirkels vnder his chaps weare away.

CHAP. XIII.

Of Hide-bound, or consumption of the flesh.

Hide-bound, or consumption of the flesh, proceedeth from vnreasonable trauell, disorderly diet, and many surfets. It is knowne by a generall dislike and leanness over the whole body, and by the sticking of the skinn close to the body, in such sort that it will not rise from the body. The cure is first to let the horse bloud, and then giue him to drinke three or foure mornings together, a quart of new milke, with two spoonfuls of hony, and one spoonfull of course Treacle: then let his foode be either sodden Barly, warme Graines and salt, or Beanes spelted in a mill; his drinke Mash.

The Cure.

CHAP. XV.

Of the breast paine, or any other sicknesse proceeding from the heart, as the Antecor, and such like.

THese diseases proceed from too ranke feeding, and much fatnesse: the signes are, a foltering in his forelegges, a disablenesse to bow downe his necke, & a trembling ouer all his body. The cure is to let him bloud, and giue him three mornings together two spoonfuls of *Diapente* in a quart of Ale or Beere; for it alone putteth away all infection from the heart.

The Cure.

CHAP. XVI.

Of tired Horses.

IF your horse be tyred, either in iourning, or in any hunting match, your best helpe for him is to giue him warme vrine to drinke, and letting him bloud in the mouth, to suffer him to licke vp and swallow the same. Then if you can come where any Nettles are, to rub his

mouth and sheath well therewith : then gently to ride him till you come to your resting place , where set him vp very warme; and before you goe to bed , giue him fixe spoonfuls of *Aqua vita* to drinke, and as much prouender as he will eate. The next morning rub his legges with Sheeps-foot Oyle, and it will bring fresh nimbleness to his Sinewes.

CHAP. XVII.

Of diseases in the Stomacke, as Surfets, loathing of Meats or Drinke, or such like.

IF your horse with the glut of prouender, or eating raw food, haue giuen such offence to this stomacke, that he casteth vp all he eateth or drinketh, you shall first giue him a comfortable drench, as *Diapente*, or *Treaphamicon* in Ale or Beere; and then keeping him fasting, let him haue no food but what he eateth out of your hand, which would be Bread well bak't and old, and after euery two or three bits a Locke of sweet hay; and his drinke would be onely new milke till his stomack haue gotten strength: and in a bagge you shall continually hang at his nose sowre brown-bread steep't in Vinegar, at which he must euer smell, and his stomacke will quickly come againe to his first strength.

CHAP. XVIII.

Of Foundring in the Body.

FOUNDRING in the body is of all surfets the mortallest and soonest gotten: it proceedeth from intemperate riding a horse when he is fat, and then sodainly suffering him to take cold: then washing a fat horse there is nothing sooner bringeth this infirmitie. The signes are sadness of countenance, staring haire, stiffness of limbe, and losse of belly: and the cure is onely to giue him wholesome strong meat, a bread of cleane beanes, and warme drinke,

The cure.

drinke, and for two or three mornings together a quart of Ale brued with Pepper and Cynamon, and a spoonefull of Treakle.

CHAP. XIX.

Of the Hungry Euill.

THe Hungry Euill is an vnnaturall and over-hastie greedinesse in a horse to deuoure his meat faster then he can chew it, and is onely knowne by his greedie snatch-
ing at his meat, as if he would deuoure it whole. The cure
is, to giue him to drinke Milke and Wheat-meale mixt
together by a quart at a time, and to feede him with pro-
uender by a little and a little, till he forsake it.

The cure.

CHAP. XX.

*Of the diseases of the Liuer, as Inflammations, Obstructions,
and Consumptions.*

THe Liuer, which is the vessell of bloud, is subiect to
many diseases, according to the distemperature of
the bloud: and the signes to know it is a stinking breath,
and a mutuall looking towards his body: and the cure is
to take *Aristolochia longa*, and boile it in running water
till the halfe part be consumed, and let the horse drinke
continually thereof, and it will cure all euils about the
Liuer, or any inward conduits of bloud.

The cure.

CHAP. XXI.

Of the diseases of the Gall, and especially of the Yellowes.

FROM the ouerflowing of the Gall, which is the vessell
of choller, spring many mortall diseases, especially
the Yellowes, which is an extreame faint mortall sick-
nesse if it be not preuented betime: the signes are yellow-
nesse of the eyes and skinne, and chiefly vnderneath his
vpper lip next to his fore-teeth, a sodaine and faint fal-
ling downe by the high way, or in the stable, and an vni-
uersall sweat ouer all the body. The cure is, first to let

The cure.

the horse bloud in the necke, in the mouth, and vnder the eyes; then take two penny-worth of Saffron, which being dried and made into fine powder, mixe it with sweet Butter, and in manner of a pill giue it in bals to the horse three mornings together, let his drinke be warme and his hay sprinkled with water.

CHAP. XXII.

Of the sicknesse of the Spleene.

The cure.

THe Spleene, which is the vessell of Melancholy, when it is ouer-charged therewith, growes painefull, hard, and great, in such sort that sometimes it is visible. The signes to know it, is much groaning, hastie feeding, and a continuall looking to his left side onely. The cure is: Take *Agrimonic*, and boile a good quantitie of it in the water which the horse shall drinke; and chopping the leaues small, mixe them with sweet Butter, and giue the horse two or three good round bals thereof in the manner of Pilles.

CHAP. XXIII.

Of the Dropsie, or euill habit of the body.

The cure.

THe Dropsie is that euill habit of the body, which ingendred by surfets and vnreasonable labour, altereth the colours and complexions of horses, and changeth the haire, in such an vnnaturall sort, that a man shall not know the Beast with which he hath beene most familiar. The cure is, to take a handfull or two of *Woormewood*, and boiling it in Ale or Beere, a quart or better, giue the horse it to drinke luke-warme Morning and Euening, and let him onely drinke his water at Noone time of the day.

CHAP. XXIIII.

Of the Chollicke, Belly-ake, and Belly-bound.

THe Chollicke or Belly-ake is a fretting, gnawing, or swelling of the Belly or great bag, proceeding from windy

windy humours, or from the eating of greene Corne or Pulse, hot Graines without Salt or labour, or Bread dowe bak't: and Belly-bound is when a horse cannot dung. The cure of the Chollicke or Belly-ake is, to take good store of the hearbe *Dill*, and boile it in the water you giue your horse to drinke; but if hee cannot dung, then you shall boile in his water good store of the hearbe *Fumecrete*, and it will make him loose without danger or hurting.

The cure.

CHAP. XXV.

Of the Laxe, or Bloudy Flix.

THe Laxe or Bloudy Flix is an vnnaturall loosenesse in a horses body, which not being staied, will for want of other excrement make a horse void bloud only. The cure is, take a handfull of the hearb *Shepheards-Purse*, and boile it in a quart of strong Ale, and when it is lukewarme, take the seeds of the hearbe *Wood-rose* stamp't, and put it therein, and giue it the horse to drinke.

The cure.

CHAP. XXVI.

Of the falling of the Fundament.

THis commeth through mislike and weakenesse; and the cure is: Take *Towne-Cresses*, and hauing dried them to powder, with your hand put vp the Fundament, and then strow the powder thereon, after it lay a little hony thereon, and then strow more of the powder, mixt with the powder of *Comin*, and it helpeth.

The cure.

CHAP. XXVII.

Of Bots and Wormes of all sorts.

THe Bots and gnawing of Wormes is a grievous paine, and the signes to know them is the horses oft beating his belly, and tumbling, and wallowing on the ground, with much desire to lie on his backe. The cure is: Take either the seeds bruised, or the leaues chopt of the hearbe

The cure.

hearbe *Amies*, and mixe it with hony, and making two or three bals thereof, make the horse swallow them downe.

CHAP. XXVIII.

Of the paine in the Kidnies, Paine-pisse, or the Stone.

The cure.

ALL these diseases spring from one ground, which is onely grauell and hard matter gathered together in the Kidnies, and so stopping the conduits of Vrine: the signes are onely that the horse will oft straine to pisse, but cannot. The cure is, to take a handfull of *Maydenhaire*, and steepe it all night in a quart of strong Ale, and giue it the horse to drinke euery morning till he be well: this will breake any stone whatsoever in a horse.

CHAP. XXIX.

Of the Strangullion.

The cure.

THis is a forenesse in the horses yard, and a hot burning smarting when hee pisseth: the signes are, hee will pisse oft, yet but a drop or two at once. The cure is, to boile in the water which he drinketh, good store of the hearbe *Mayth* or *Hogs-fennell*, and it will cure him.

CHAP. XXX.

Of pissing blond.

The cure.

THis commeth with ouer-trauelling a horse, or tra- uelling a horse sore in the winter when hee goeth to grasse. The cure is: Take *Aristolochia longa*, a handfull, and boile it in a quart of Ale, and giue it the horse to drinke luke-warme, and giue him also rest.

CHAP. XXXI.

Of the Colt-euill, mattring of the yard, falling of the yard, sheding the Seede.

The cure.

ALL these euils proceede from much lust in a horse, and the cure is, the powder of the hearbe *Mint*, and the leaues of *Bettonie*, stampe them with white wine, to a moist salve, and annoint the sore therewith, and it will heale

heale all imperfection in the yard: but if the horse shed his seede, then beate Venice-turpentine and Sugar together, and giue him euery morning a good round ball thereof till the fluxe stay.

CHAP. XXXII.

Of the particular diseases in Mares, barrennesse, consumption, rage of loue, casting foales, barrennesse to foale, and how to make a mare cast the Foale.

IF you would haue your Mare barraine, let good store of the hearbe *Agnus castus* be boiled in the water three drinckes. If you would haue her fruitfull, then boile good store of *Mother-wort* in the water which shee drinketh: if she lose her belly, which sheweth a consumption of the wombe, you shall then giue her a quart of Brine to drinke, *Mug-wort* being boiled therein. If your Mare through pride of keeping grow into too extreame lust, so that she will neglect her food through the violence of her fleshly appetite, as it is often seene amongst them, you shall house her for two or three dayes, and giue her euery morning a ball of Butter and *Agnus castus* chopt together. If you would haue your Mare to cast a foale, take a handfull of *Dettonie*, and boile it in a quart of Ale, and it will deliuer her presently. If she cannot foale, take the hearbe *Horse-mint*, and either drie it or stampe it, and take the powder or the iuyce, and mixe it with strong Ale, and giue it the Mare, and it will helpe her. If your Mare from former brusings or stroakes be apt to cast her foales, as many are, you shall keepe her at grasse very warme, and once in a weeke giue her a warme mash of drinke: this secretly knitteth beyond expectation.

CHAP. XXXIII.

Of drinking venome, as horse-leeches, hens dung, or such like.

IF your horse haue drunke Horse-leeches, hens dung, feathers, or such like venemous things, which you shall know

know by his panting, swelling, or scouring, you shall take the hearbe *Sow-thistle*, and drying it, beate it into powder, and put three spoonfulls thereof into a quart of Ale, and giue it the horse to drinke.

CHAP. XXXIIII.

Of Suppositaries, Glisters and Purgations.

IF your horse by sicknesse, strict dyet, or too vehement trauell, grow drie and coſtiue in his body, as it is ordinary; the ealiest meanes in extremitie to helpe him, is to giue him a Suppositarie; the best of which is, to take a Candle of foure in the pound, and cut off ſiue inches at the bigger end, and thrusting it vp a good way with your hand into his fundament, presently clap downe his taile, and hold it hard to his tuell a quarter of an houre, or halfe an houre: and then giue him libertie to dung; but if this be not strong enough: then you shall giue him a glister, and that is, take foure handfulls of the hearbe *Anise*, and boile it in a pottell of running water, till halfe be consumed, then take the decoction and mixe it with a pine of Sallet-oyle, and a pretty quantity of salt, and with a glister-pipe giue it him at his tuell. But if this be too weake, then giue him a purgation, thus. Take twenty *Reisons* of the Sunne, without stones, and ten *Figges* slit, boyle them in a pottell of running water, till it come to a gellie; then mixe it with the powder of *Licor as*, *Aniseeds* and *Sugar-candy*, till it be like paste, then make it into balls, and role it in sweet Butter, and so giue it the Horse, to the quantitie of three Hen egges.

CHAP. XXXV.

Of Neefings and Frictions.

THere be other two excellent helpes for sicke horses, as Frictions, and Neefings: the first to comfort the outward parts of the body, when the vitall powers are astonished:

conished: the other to purge the head when it is stopp
with fleame, cold, or other thicke humours. And of Fri-
ctions, the best is *Vinegar* and *Patch-grease* melted toge-
ther, and very hot chafed into the horses body against the
haire. And to make a horse neese, there is nothing better
then to take a bunch of *Pellitory of spaine*, and binding
it vnder a sticke, thrust it vp a horses nostrill, and it will
make him neese without hurt or violence.

CHAP. XXXVI.
Of diseases in the Eyes, as *watry Eyes*, *bloud-shotten Eyes*,
dimme Eyes, *moone Eyes*, *stroke in the Eye*, *wart in the Eye*,
inflammation in the Eye, *Pearle*, *Pin*, *Webbe*, or *Haw*.

V Nto the Eye belongeth many diseases, all which haue
their true signes in their names, and as touching that
which is watry, bloudshotten, dimme, moone, stricken, or
inflamed, they haue all one cure. The cure is, Take *Worme-
wood*, and beate it in a Morter with the gall of a Bull,
straine it, and annoint the horses eyes therewith, and it is
an approved remedy. But for the Wart, Pearle, Pin or
Webbe, which are euils growne in and vpon the Eye, to
take them off, take the iuyce of the hearbe *Betyn*, and wash
his eyes therewith, and it will weare the spots away: For
the Haw euery Smith can cut it out.

The Cure.

CHAP. XXXVII.

Of the *Impostume in the eare*, *Pole-euill*, *Fistula*, *swelling af-
ter bloud-letting*, *any gald backe*, *Canker in the Withers*, *Sit-
fast*, *Wens*, *Navel-gall*, or any hollow *ulcer*.

T Hese diseases are so apparant and common, that
they neede no further description but their names,
and the most certaine cure is to take Clay of a mud or
lome wall, without Lime, the strawes and all, and boyling
it in strong Vinegar, apply it plaister-wise to the sore,
and it will of it owne nature search to the bottome, and

The Cure.

M

heale

heale it: provided that if you see any dead or proud flesh arise, that then you either cate or cut it away.

CHAP. XXXVIII.

Of the Vines.

FOR the Vines, which is an inflammation of the Kinnels betweene the chap and the necke of the horse: take *Pepper* one penniworth, of *Swines-grease* one spoonfull, the iuyce of a handfull of *Rewe*, *Vinegar* two spoonfulls, mixe them together, and then put it equally into both the horses eares, and then tie them vp with two flat laces, then shake the eares that the medicine may goe downe, which done, let the horse bloud in the necke, and in the temple veines, and it is a certaine cure.

CHAP. XXXIX.

Of the Strangle, or any Bile, Botch, or other Impostume whatsoener.

ALL these diseases are of one nature, being onely hard Biles or Impostumes gathered together by euill humors, either betweene the chaps, or elsewhere on the body. The cure is: take *Sothernwood*, and dry it to powder, and with *Barly meale*, and the yolke of an *Egge* make it into a salve, and lay it to the Impostume, and it will ripen it, breake it, and heale it.

CHAP. XL.

Of the Canker in the Nose, or any other part of the body.

TO heale any Canker in what part soener it be: take the iuyce of *Plantaine*, as much *Vinegar*, and the same waight of the powder of *Alom*, and with it annoint the sore twice or thrice a day, and it will kill it, and cure it.

CHAP. XLI.

Of stanching of blond, whether it be at the Nose, or proceed from any wound.

IF your horse bleed violently at the nose, and will not be stayed, then you shall take *Bettonie*, and stampe it in a mortar with *Bay-salt*, or other white Salt, and stop it into the

The cure.

The cure.

the horses nose, or apply it to the wound, & it will stanch in but if you be suddenly taken, as riding by the high way or otherwise, and cannot get this hearbe, you shall then take any woollen cloth, or any felt Hat, and with a knife scrape a fine Lint from it, & apply it to the bleeding place, and it will stanch it.

CHAP. XLII.
Of the diseases in the mouth, as bloody Rists, Rigs, Lampas, Camery, Inflammation, Tongue-hurt, or the Barbs.

If you finde any infirmities in your horses mouth, as the bloody Rists, which are Chaps or Rists in the palate of the horses mouth; the Rigs, which are little Pustels or Bladders within the horses lips; the Lampasse, which is an excreffion of flesh about the teeth, the Camery, which is little warts in the roofof the mouth, Inflammation, which is, Blisters, Barbs, which are two little paps vnder the tongue, or any hurt on the tongue by Bittē or otherwise; you shall take the leaues of *Wormewood*, and the leaues of *Shiraz*, and beat them in a mortar with a little Honey, and with it annoynt the sores, and it will heale them, as for the Lampasse they must be burnt away, which the ignorantest Smith can doe.

The cure.

CHAP. XLIII.
Of paine in the teeth, or loose teeth.

FOR any paine in the teeth, take *Beltony*, and seeth it in Ale or Vinegar till a halfe part be consumed, & wash all the gums therewith: but if they be loose, then onely rub them with the leaues of *Elecampane* or *Horsehelme*, after they haue bin let blood, and it will fasten them.

CHAP. XLIIII.
Of the Cricke in the Necke.

FOR the Cricke in the necke, you shall first chase it with the Friction before specified, and then annoynt and bath it with *Sape* and *Vinegar*, boyled together.

CHAP. XLVI.
*Of the falling of the Crest, Mangines in the Mayne, or the di-
ding of the haire.*

ALL these diseases proceede from povertie, milke, or
ouer-riding, and the best cure of the falling of the
Crest, is bloud-letting, and proud keeping with sort of
meate, for strength & fatnesseener will raise vp the Crest,
but if the Mayne be mangie, you shall annoyne it with
Butter and Brimstone, and if the haire fall away, then take
Rothernewood, and burne it to ashes, then take those ashes
and mixing them with common Oyle, anoint the place
therewith, & it will bring haire presently, smooth, thicke,
and faire.

CHAP. XLVII.
Of paine in the Withers.

A Horses Withers are subiect to many griefes & swell-
ings, which proceed from cold humours, sometimes
from euill Saddles, therefore if at any time you see any
swelling about them, you shall take the hearbe *Heart-
tongue*, and boyle it with the Oyle of *Roses*, and very hot
apply it to the sore, and it will asswage it, or else breake it
and heale it.

CHAP. XLVIII.

Of swaying the Backe, or weakenesse in the Backe.

THese two infirmities are dangerous, and may be ea-
sed, but neuer absolutely cured, therefore where you
finde them, take *Colworts* and boyle them in Oyle, and
mixing them in a little Beane-meale charge the Backe,
and it will strengthen it.

CHAP. XLIX.

*Of the Itch in the taile, or of the generall Scabbe and Mangi-
nesse, or of the Farcie.*

FOr any of these diseases, take fresh grease, and yealow
Arsnicke, mixe them together, and where the Mangi-
nesse

nesse or Itch is, thererub it hard in, the fore being made raw: but if it be for the Parie, then with a knife slit all the knots, both hard and soft, and then rub in the medicine: which done, tie vp the Horse, so as he may not come to bite himselfe, and then after he hath stood two or three houres, take old pine and salt boyed together, and with it wash away the oynment, and then put the Horse to meate: doe thus two or three daies together, provided alwaies that you first let him blood; and take good store from him, and also give him every morning a strong scouring, or a strong purge, both which are shewed before.

CHAP. XLIX.

Of any swelling which commeth by straine, or stroke, either before or behinde, from the shoulder or hippe, downe to the Horse.

THERE be many infirmities which make a Horse halt, as pinching the shoulder, wrench in the shoulder, wrench in the neather ioynt, splatting the shoulder, shoulder pight, straines in ioynts, & such like: all which, since they happen by one accident, as namely, by the violence of some slip or straine, they may be cured by one medicine, & it is thus. After you haue found where the griefe is, as you may doe by griping and pinching euery seuerall member, then where he most complaineth, there is his most griefe. You shall take (if the straine be new) Vinegar, *Roscarmanike*, the whites of Egges, and Beane-flower, and hauing beaten them to a perfect salve, lay them very hot to the sore place, and it will cure it; but if the straine be old, then take Vinegar and Butter, and melting them together with Wheat-bran, make it into a Pulvis and lay it to the sore as hot as may be, and it will take away the griefe.

CHAP. I.
Of Foundring in the Feete.

The cure.

OF Foundring there be two sorts, a dry and a wet, the dry foundring is incurable, the wet is thus to be helpt. First pare all the soales of his feete so thin that you may see the quicke, then let him bloud at euery toe, and let them bleede well, then stop the vein with *Tallow* and *Rosen*, and hauing tackt hollow shooes on his feete, stop them with *Branne*, *Tarre* and *Tallow*, as boyling hot as may be, and renew it once in two daies, for a weeke together, then exercise him much, and his feete will come to their true vse and nimblenesse.

CHAP. II.

Of the Splent, Curbe, Bone-spanin, or any knoble or bony excreffion or ring-bone.

The cure.

A Splent is a bony excreffion vnder the knee, or the fore-legge, the Curbe is the like behinde the hinder hough, the Spauin is the like on the inside of the hinder hough, and the Ringbone is the like on the corner of the hoofe. And the cure is, first vpon the top of the excreffion, make a slit with your knife the length of a Barly-corne, or a little more, and then with a fine corner, raise the skinne from the bone, and hauing made it hollow the compasse of the excreffion and no more, take a little flint and dip it into the Oyle of *Origannum*, and thrust it into the hole and cover the knob, and so let it bide till you see it rot, and that Nature casteth out both the medicine and the Core. As for the Ring-bone you shall need to scarifie and annoynt it with the Oyle onely.

CHAP. LII.

Of the Mallander, Selander, Paines, Scratches, Meller, Mules, Crowne-scabs, and such like.

FOR any of these sorances, you shall take *Verdigrease*, and soft grease, and grinding them together, to an oyntment,

ointment, put it in a boxe by it selfe; then take *Waxe*, *Hogges grease*, and *Turpentine*, of each alike, & being melted together, put that salve into another boxe: then when you come to dresse the sore, after you haue taken off the scab and made it raw, you shall annoint it with your greene salve of *Kerdigrease* and fresh grease onely for two or three dayes; it is a sharpe salve, and will kill the cancerous humour; then when you see the sore looke faire, you shall take two parts of the yellow salve, and one part of the greene salve, and mixing them together, annoynt the sore therewith till it be whole, making it stronger or weaker as you shall finde occasion.

CHAP. LIII.

Of an upper Attaint, or nether Attaint, or any hurt by over-reaching.

THese Attaints are strokes or cuts by over-reaching, either on the backe sinew of the fore-legge, on the heeles or nether ioynnts, and may be safely healed by the same former medecine, & meane which healeth the Mallander, or Selander, in the former Chapter, onely for your over-reaches, you shall before you apply your salve, lay the sore plaine and open, without hollownesse, and wash it with beere and salt, or Vinegar and Salt.

Of the infirmities of hooves, as false quarters, loose hooves, casting hooves, hoofs-band, hoofs-ranings, hoofs-brille, hoofs-hart, hoofs safe, hoofs hard, or generally to preserve hooves.

The hoofs is subject to many miseries; as first to false quarters, which cometh by pricking; and must be help't by good shoeing, where the shoe must beare on every part of the foot but vpon the false quarters onely. If the hoofs be loose, annoynt it with Pitch of Burgundy, and it will knit it: if it be cleane cast off, then Pitch of Burgundy and Tallow molten together, will bring a new: if it be

be bound or matted, it must be very well opened at the
hoofes, the sole kept moyst, and the hornes anointed
with the fat of *Bacon* and *Tallow*: If the hame of the feet run
with running matter, it must be stopp'd with *Sole*, *Turpen-
tine* and *Bulwarth* mixt together: if it be brittle or bro-
ken, then annoynt it with *Pitch* and *Linseed oyle*, moysten
to a soft salve: if it be soft, then stop it with *Sole*, and the
ashes of a burnt *Red* mixt together: if the hoofes be hard,
lay hot burning *Cinder* vpon them, and then stop them
with *Tin* and *Tallow*: and generally for the preserving of
all good bloods, annoynt them daily with the inward or
rinde of fat *Bacon*.

Of the bloud Spawen, or Hough bonye, or any other *swelling*, from what cause soever it proceedeth.

The cure.

THese two forances are pussels, or soft round swell-
ings, the first on the inside of the hinder hough, and
the other on the very Huckle of the hough behind: they
are soft and very sore and the cure is: first to take vp the
veine above, and let it bleed onely from below, then ha-
ving knit it fast with two Shoemakers ends on both sides
the slit, cut the veine in two peeces; then take *Lin-seed*,
and bruse it in a mortar, then mixe it with *Clawding*, and
heate it in a frying Pan, and apply it to the swelling
onely, and if it breake and runne, then heale it with a plai-
ster of *Ritch*, and the horse shall neuer be troubled with
Spawen more: but if the swelling come by a strain or bruse,
then take *Pitch-grease*, and melleing it annoynt the sore
therewith, holding a hot yron cleare it to sinke in the
grease, then fould a linnen cloth about it, and it will af-
swage all swellings whatsoeuer.

CHAP. LVI.

Of Winde-galles.

THese are little blebs or soft swellings on each side the Fetlocke, procured by much trauell on hard and stony waies. The cure is to prick them, and to let out the selley, and then dry vp the sore with a plaister of *Pitch*. The cure.

CHAP. LVII.

Of Enterfayring or Shackell-gall, or any gallings.

ENterfayring is hewing one legge on another, and striking off the skinne: it proceedeth from weakenesse or straightnes of the horses pace, and Shackell-gall is any gall vnderneath the Fetlocke. The cure is, to annoynt them with *Turpentine* and *Verdigrease* mixt together, or *Turpentine* alone, if it rankle not too much. The cure.

CHAP. LVIII.

Hurts on the Cronet, as the quitterbone or Matlong.

THE Quitterbone is a hollow vlcet on the top of the Cronet, and so is the Matlong, and the cure is: First to taint it with *Verdi-grease* till you haue eaten out the Core, and made the wound cleane; then you shall heale it vp with the same salues that you heale the Scratches. The cure.

CHAP. LIX

Of wounds in the foote, as grauelling, pricking, figge, retrayt, or cloying.

IF your horse haue any wound in his foote, by what mischance soeuer, you shall first search it, and see that it be cleare of any nayle poynt or other splent to annoy it, then wash it very well with white *Wine* and *Salt*, and after tent it with the oyntment called *Aegyptiacum*, and then lay hot vpon the tent, with *Flaxe* hurds, *Turpentine*, *Oyle*, and *Waxe* mingled together, and annoynt all the top of the hoofe and cronet with *Bolearmoniake* and *Vinegar*: doe thus once a day till the sore be whole.

CHAP. LX.

To draw out a Stubbe or Thorne.

TAke the hearbe *Detany*, and bruiſe it in a mortar with blacke *Sope*, and lay it to the ſore, and it will draw out the Splent, Iron, or Thorne.

CHAP. LXI.

Of the Aubury or Tetter.

The cure.

THe Aubury is a bloudy wart on any part of the horſes body, and the Tetter is a cankerous vlcer like it: The cure of both is with an hot yron to ſeare the one plaine to the body, and to ſcarifie the other; then take the iuyce of *Plantaine*, and mixe it with *Vinegar*, *Honey*, and the powder of *Allome*, and with it annoint the ſore till it be whole.

CHAP. LXII.

Of the Cords, or ſtring-halt.

THis is an vnnaturall binding of the ſinewes; which imperfection a horſe bringeth into the world with him; and therfore it is certaine it is incurable, & not painfull, but onely an eye-ſore, yet the beſt way to keepe it from any worſe inconuenience, iſt to bathe his limbes in the decoction of *Coleworts*.

CHAP. LXIII.

Of Spur-galling, or fretting the ſkinne and haire.

FOr this there is nothing better then *Piſſe* and *Salt*, with which waſh the ſore daily.

CHAP. LXIIII.

Of healing any old ſore or wound.

FReſh *Butter* and the hearbe *Ameos* chopt & beaten together to a ſalue will heale any wound, or any old ſore.

CHAP. LXV.

Of Sinewes being cut.

IF the Horſes Sinewes be cut, take the leaues of wilde *Nepe* or *Woodbine*, and beating them in a mortar with
May-

May-Butter, apply it to the ſore, and it will knit the Si-
newes.

CHAP. LXVI.

Of eating away dead fleſh.

TAke *Stubwort*, and lap it in a red Docke leafe, and roſt
it in the hot cinders, and lay it to the ſore, and it will
eate away any dead fleſh.

CHAP. LXVII.

Of Knots in the Ioynts.

Patch-greafe applied as is before ſhewed for ſwellings,
will take away any hard knots in the fleſh, or vpon
the ſinewes.

CHAP. LXVIII.

*Of Venemous wounds, as biting with a mad dog, tusked of
Bores, Serpents, or ſuch like.*

FOR any of theſe mortall or venemous wounds, take
Tarrow, *Calamint*, and the graines of *Wheate*, & beate
them in a mortar with water of *Sotherne-wood*, and make
it into a ſalue, and lay it to the ſore, and it will heale it
ſafely.

CHAP. LXIX.

Of Lyce, or Nits.

THIS filthines of Vermine is bred in a Horſe through
vnnaturall diſlike and pouertie: the cure is: Take the
iuyce of *Beets* and *Staueſaker* beaten together, and with
it annoynt the horſes body ouer, and it will make him
cleane. The cure.

CHAP. LXX.

Of defending a Horſe from flies.

TAke the iuyce of *Pellitory of Spaine* and mixing it with
milke annoint the horſes belly therewith, and no flies
will trouble him.

CHAP. LXXI.

Of broken bones, or bones out of ioynt.

After you haue placed the bones in their true places; take the *Ferne Osmund*, and beat it in a morter with the Oyle of *Swallowes*, and annoynt all the member, then splent it and role it vp, and in fiteene daies, the bones will knit and be strong.

CHAP. LXXII.

Of drying vp sores when they be almost whole.

ALLom burnt, vnslakt *Lime*, the ashes of an old shoe-sole burnt, or Oyster-shels burnt, any of these simply by themselves, will dry vp any sore.

CHAP. LXXIII.

A most famous receit to make a Horse that is leane, and full of inward sicknesse, sound and fatte in fourteene dayes.

TAke of *Wheate-meale* fixe pound, *Annis-seeds* two ounces, *Commin-seeds* fixe drammes, *Carthamus*, one dramme and a halfe, *Fennegricke-seeds* one ounce two drammes, *Brimstone* one ounce and a halfe, *Sallet-oyle* one pinte, *Hony* one pound and a halfe, *White wine*, foure pintes; this must be made into paste, the hard simples being pounded into powder, and finely searst and then kneaded together, and so made into bals as bigge as a mans fist, then euery watring consume one of those bals in his cold water, which hee drinketh for morning and euening for fifteen daies together, and if at first he be dainty to drinke the water, yet care not, but let him fast till hee drinke it, and after he begins to take it hee will drinke it with great greedinesse.

CHAP. LXXIIII.

How to make a white Starre.

SLit the horses fore-head the length of your *Starre*, and then raise the skin vp with a corner, and put in a plate.

plate of Leade as bigge as the Starre, and let it remaine so two or three dayes; & then let it out and presse downe the skinne with your hand, and that haire will fall away, and white will come in the place.

The end of the Horse.



The generall cure and ordering of the Bull, Cow, Calfe, or Oxe.

CHAP. I.

Of the Bull, Cow, Calfe or Oxe, their shape, breede, vse, choyse and preservation.



FOR as much as the male of all creatures are the principall in the breede and generation of things, and that the fruit which issueth from their seede, participateth most with their outward shapes and inward qualities, I thinke fittest in this place, where I intend to treat of Horned-cattell and Neate, to speake first of the choyse of a fayre Bull, being the breeders principallest instrument of profit. You shall vnderstand then, that of our English cattell (for I will not speake of those in Italie and other forraigne countries, as other Authors doe, and forget mine owne) the best are bred in *Yorke-shire, Darby-shire, Lanca-shire, Stafford-shire, Lincolne-shire, Gloster-shire, and Somerset-shire*, though they which are bred in *Yorke-shire, Darby-shire, Lanca-shire, and Stafford-shire*, are generally all blacke of colour, and

The countries for breed.

though they whose blacknesse is purest, and their haire like Veluet, are esteemed best; they haue exceeding large hornes, and very white, with blacke tippes; they are of stately shape, bigge, round, and well buckled together in euery member, short ioyned, and most comely to the eye, so that they are esteemed excellent in the market: those in *Lincolne-shire* are the most part pide with more white, then the other colours; their hornes little and crooked; of bodies exceeding tall, long and large, leane, and thin thighed, strong hooued, not apt to surbaite, and are indeed fittest for labour and draught. Those in *Somer-set-shire* and *Glocester-shire* are generally of a bloud-red colour, in all shapes like vnto those in *Lincolne shire*, and fittest for their vses. Now to mixe a race of these and the blacke ones together is not good, for their shapes and colours are so contrary that their issue are very vncomely: therefore I would wish all men to make their breeds either simply from one and the same kinde, or else to mixe *Yorke-shire* with *Stafford-shire* with *Lanca-shire*, or *Darby-shire* with one of the blacke races, and so likewise *Lincolne-shire* with *Sometset-shire*, or *Somer-set-shire* with *Glocester-shire*.

Of not mixing, and mixing of races.

The shape of the Bull.

Now for the shape of your Bull; hee would be of a sharpe and quicke countenance, his hornes the larger the better, his necke fleshie, his belly long and large, his forehead broad and curled, his eyes blacke and large, his eares rough within, and haire like veluet, his muzell large and broad at the vpper lip, but narrow and small at the neather, his nostrill crooked within, yet wide and open, his dew-lap extending from his neather lip downe to his fore-boothes, large, fide, thinne, and hairy; his breast rough and bigge, his shoulders large, broad and deepe, his ribs broad and wide, his backe straight and flat, euen to the setting

setting on of his tayle, which would stand high, his huckle-bones round and faire appearing, making his buttockes square, his thighs round, his legs straight and short ioyned; his knees round and big, his hooves or clawes long and hollow, his tayle long and bush-haired, and his pyzell round, and also well haired. These Bulls as they are for breed, so they are excellently good for the draught, onely they naturally draw better single, like horses, then in the yoake, like Oxen: the reason as I suppose being, because they can hardly be match't in an equall manner.

The vse of
the Bull.

Now for the Cow, you shall chuse her of the same Country with your Bull, and as neare as may be of one colour, onely her bagge or vdder would euen be white, with foure teats and no more, her belly would be round and large, her forehead broad and smooth, and all her other parts such as are before shewed in the male kinde.

Of the Cow
& her shape.

The vse of the Cow is two-fold, either for the Dairie, or for breed: The red Cow giueth the best milke, and the blacke Cow bringeth forth the goodliest Calfe. The yong Cow is the best for breed, yet the indifferent old are not to be refused. That Cow which giueth milke longest is best for both purposes, for she which goes long drie loseth halfe her profit, and is lesse fit for teeming: for commonly they are subiect to feede, and that straineth the wombe or matrix.

Of her vse.

Now for Calues: there are two wayes of breeding them: the one to let them runne with their Dams all the yeere, which is best, and maketh the goodliest beast: the other, to take them from their Dams, after their first sucking, and so bring them vp on the finger, with flotten Milke, the colde onely being taken away and no more; for to giue a young Calfe hot milke is present death, or very dangerous. If your Calfe be calued in the five dayes after

Of Calues,
and their
nourishing.

Observati-
ons.

the

the change, which is called the *Prime*, doe not reare it, for most assuredly it will haue the Sturdy, therefore preferue it onely for the Butcher; also, when you haue preferred those male Calues, which shall be Bulls, then geld the rest for Oxen, and the younger they are geldt the better. The best time for rearing of Calues, is from *Michaelmas* till *Candlemas*. A Calfe would be nourished with Milke twelue weekes, onely a fortnight before you weane it from Milke, let the Milke be mixt with water. After your Calfe hath drunke Milke one moneth: you shall take the finest, sweetest, and softest Hay you can get, and putting little wisps into clouen stickes, place them so as the Calfe may come to them and learne to eate Hay. After our *Ladies-day*, when the weather is faire, you may turne your Calues to grasse, but by no meanes let it be ranke, but short and sweet, so that they may get it with some labour.

Of the Oxe,
and his vse.

Now of the Oxe: You shall vnderstand that the largest are the best and most profitable, both for draught or feeding: for he is the strongest to indure labour, and best able to containe both flesh and tallow. Now for his shape, it differeth nothing from that of the Bull, onely his face would be smooth, and his belly deeper. That Oxe is fittest for the yoake, which is of gentlest nature, and most familiar with the man. In matching your Oxen for the yoake, let them as neare as may be, be of one height, spirit and strength, for the stronger will euer wrong the weaker, and the duller will iniure him that is of free spirit, except the driuer be carefull to keepe the dull Oxe to his labour. Oxen for the yoake, would by no meanes be put beyond their ordinary pace: for violence in travell heates them, heat breeds surfet, and surfet those diseases which makes them vnapt to feede, or for any other vse of goodnesse.

goodness. Your Oxe for the yoke will labour well with Barley-straw, or Pease-straw, and for the plow, which is Hay and straw mixed together, which will labour no better feeding.

Of his food for labour,

Now for your Oxe to feede, hee would as much as might be, be euer of lusty and young yeeres, or if old, yet healthfull and vnbruised, which you shall know by a good taile, and a good pyzell; for if the hane of one or both be lost, then he is a waster & will be long in feeding. If you doe see the Oxe doth licken himselfe all ouer, it is a good signe that he is marketable and will feede, for it shewes soundnesse, and that the Beast taketh a ioy in himselfe: yet whilst he doth so licken himselfe he feedeth not, for his own pride hindereth him, and therefore the husband-man will lay the Oxes owne dung vpon his hide, which will make him leaue licken and fall to his foode. Now if you goe to chuse a fat beast, you shall handle his hindmost ribbe, and if it be soft and loose, like Downe, then it shewes the Oxe is outwardly well fed: so doth soft buckell bones, and a bigge natch round and knotty: if his cod be big and full, it shewes hee is well rallowed, and so doth the fat croppe behinde the shoulders: If it be a Cow, then handle her navel, and if that be big round and soft, surely she is well rallowed. Many other obseruations there are, but they be so well knowne, and common in euery mans vse, that they need no curious demonstration.

Oxe to feed for the Butcher,

Now for the preservation of these Cattell in good and perfect health. It shall be meete that for the young and lusty, and, indeede generally for all sorts, except Calues, to let them bloud twice in the yeere, namely the Spring and fall, the Moone being in any of the lower signes, and also to giue them to drinke of the pickle of Oxe mixed with a head of ashe bruised therein. And

To preserve Cattell in health.

for your Calues, be onely carefull that they goe not too
 soone to Grass, and small danger is to be feared. Now
 notwithstanding all a mans carefullie, beasts daily doe
 get infirmities, and often fall into mortall extremities, per
 use therefore these Chapters following, and you shall
 finde cure for every particular disease.

CHAP. II.
Of the Feauer in Cartell.

Cartell are most subiect vnto a Feauer, and it cometh
 either from surfet of foode, being raw, and musty, or
 from fluxe of cold humors, increased by cold keeping.
 The signes are trembling, heauie eyes, a foaming mouth,
 and much groaning; and the cure is first, you shall let
 him blood, and then giue him to drinke a quart of Ale,
 in which is boiled three or foure rooks of *Plantaine*, and
 two spoonfulls of the best *Treacle*, and let his Hay be
 sprinkled with water.

The cure.

CHAP. III.
Of any inward sicknesse in Cartell.

For any inward sicknesse or drooping in Cartell, take
 a quart of strong Ale, and boile it with a handfull of
Wormewood, and halfe a handfull of *Rose*, then straine it,
 and adde to it two spoonfulls of the iuyce of *Garlick*, and
 as much of the iuyce of *Roselecke*, and as much *Treacle*,
 and giue it the beast to drinke, being no more but like
 warme.

CHAP. IIII.

Of the distemper in the head, as the Sturdy, or turning-eull.

The cure.

This disease of the Sturdy is knowne by a continuall
 turning about of the Beast in one place; and the cure
 is, to cast the Beast, and hauing made his feete fast, to slit
 the vpper part of his forehead crosse-wise, about foure
 inches each way, then turning vp the skinne and laying
 the skull bare, cut a peece out of the skull two inches
 square.

square or more: then looke, and cut it with the pincel of the braine you shall see a bladder full of water and bloud, which you shall very gently take out, and throw away; then annoynt the place with warme fresse Butter, turne downe the skin, and with a Needle and a litle red Silke stich it close together, then lay on a hot plaister of Oyle, Turpentine, Waxe, and a litle Rosen melted together with Flaxe-burds, and so folding warme woollen cloathes about her head; let the Beast rise, and so remaine three or foure daies ere you dresse it againe, and then heale it vp like another wound, onely observe in this cure by no meanes you touch the braine, for that is mortall, and then the helpe is both common and most easie.

CHAP. V.

Of diseases in the eyes of Cattell, as the Hane, a Stroke, inflammation, weeping, or the Pinne or webbe.

FOR any generall sorenesse in the eyes of Cattell, take the water of Eye-bright, mixt with the iuyce of House-lecke, and wash them therewith, and it will recouer them: but if a Hane breede therein, then you shall cut it out, which enery simple Smith can doe. But for a stroke, inflammation, Pinne or Webbe, which breeds excreffions vpon the eyes; take a new laid Egge, and put out halfe the white; then fill it vp with Salt, and a litle Ginger, and roste it extreame hard in hot finders; which done, beate it to powder shell and all; but before you roste it, wrap it in a wet cloth, and put of this powder into the beafts eye, and it will cure it.

CHAP. VI.

Of diseases in the mouth, as Barbs vnder the tongue, Blaine on the tongue, teeth loose, or tongue venomed.

THESE Barbs or Paps which grow vnder the tongues of Cattell, and being inflamed doe hinder them from
O 2 feeding,

feeding, you shall with a keene paire of Sheares cut away close by the flesh, and if they bleed much (as they will doe if they be ranke) you shall then with a red hot Bodkin seare them, and droppe on the top of the seared places a drop or two of *Brisen* and *Burser* mixt together; but if they bleed not, then onely rub them with *Sage* and *Salt*; and they will heale. Now for the blaine on the tongue, of some called the tin-blaine, it is a blister which groweth at the rootes of the tongue, and cometh through heat of the stomacke and much chafing, and is oft very mortall, for it will rise so suddenly and so big that it will stop the winde of the Beast. The cure is, to thrust your hand into the mouth of the Beast, and drawing out his tongue, with your naile to breake the blister, and then to wash the sore place with strong *Brine*, or *Sage*, *Salt* and *Water*: if you finde more blisters then one, breake them all, and wash them, and it is a present cure. Now for loose teeth, you shall let the beast blood in his gummes, and vnder his taile, then wash his chaps with *Sage* and *Woodbine* leaues boild in *Brine*: Last'y, if the tongue be venomd, which you shall know by the vnnaturall swelling thereof: you shall take *Plantaine*, and boiling it with *Vinegar* and *Salt*, wash the tongue therewith, and it will cure it.

CHAP. VII.

Of diseases in the necke, as being galled, bruyed, swollen, out of ioynt, or hauing the clothe.

If any Oxes necke be galled, bruyed, or swollen with the yooke, take the leaues of round *Aristolachia*, and beating them in a Morter, with Tallow, or fresh Grease, anoint the sore place therewith, and it will not onely heale it, but any straine in the Necke, euen if the bone be a little disordered. Now for the Closshe or Clowse, which causeth a beast to pill and loose the haire from his necke, and

is bred by drawing in wet and rainie weather: you shall take the ashes of an old burnt Shoe, and strew it vpon the Necke, and then rub it ouer with *Tallow* and *Turpentine* mixt together.

CHAP. VIII.

Of the Pestilence, Gargyll, or Murraine in Beasts.

THis Pestilence or Murraine amongst Beasts is bred by diuers occasions; as from rancknesse of blood, or feeding; from corruption of the ayre, intemperatenesse of the weather, inundation of floods, or the infection of other Cattell: much might be said of the violence and mortalitie thereof, which hath vtterly vsurnished whole Countries: but to goe to the cure; you shall giue to all your Cattell, as well the sound as sicke, this medicine, which neuer failed to preserue as many as haue taken it: Take of old strong *Vrine* a quart, and mixe it with more then halfe a handfull of Hens dung, well dissolued therein, and giue it your beast to drinke.

The cure.

CHAP. IX.

Of the milking, or leanness of Beasts.

IF your Beast fall into any vnaturall milke or leanness, which you shall know by the disflowring of his hayre; you shall then cause him first to be let blood, and after take sweet Butter and beat it in a Morter, with a little *Mirrh*, and the shauing of *Iuoy*, and being kept fasting, make him swallow downe two or three Bals thereof; and if it be in the winter, feede him with sweet Hay, if in the Summer, put him to grasse.

CHAP. X.

Of the diseases in the guts, as Fluxe, Costinensse, Chollicke, and such like.

IF your Beast be troubled with any sore Laxe, or bloody-fluxe, you shall take a handfull of the seeds of *Wood-rose*, and being dried and beaten to powder, brew it with

a quart of strong Ale, and giue it the beast to drinke. But if he be too drie or costine in his body, then you shall take a handfull of *Pennygrecke*, and boyle it in a quart of Ale, and giue it him to drinke; but for any chollicke or belly ake, or gnawing of the guts, boyle in the water which he drinketh good store of Oyle, and it will helpe him.

CHAP. XI.

Of pissing of bloud.

IF your Beast pisse bloud, which commeth either of Louer-labouring, or of hard and sower feeding, you shall take *Shepherds purse*, & boyle it in a quart of red Wine, and then straine it, and put to it a little *Synamon*, and so giue it the Beast to drinke.

CHAP. XII.

Of dropping Nostriils, or any cold in the Head.

IF your Beasts nostrils run continually, which is a signe of cold in the head; you shall take *Butter* and *Brimstone*, and mixing them together, annoint two Goose feathers therewith, & thrust them vp into the nostrils of the Beast: & vse thus to doe euery morning til they leaue dropping.

CHAP. XIII.

Of any swelling in a Beast whatsoever.

IF your Beast haue any outward swelling, bathe it with Oyle and *Vinegar* exceeding hot, and it will assuage it; but if the swelling be inward, then boile round *Aristolochia* in his water.

CHAP. XIII.

Of the worme in the taile.

THere is a worme which will breede in the tayle of a beast, and doth not onely keepe him from feeding, but also eateth away the haire of the taile, and disfigureth the beast. The cure is, to wash the taile in strong lye made of *Prime* and *Ass-wood ashes*, and that will kill the worme, and also heale and drie vp the soare.

The cure.

CHAP.

CHAP. XV.

Of any Cough or shortnesse of breath in Cattel.

IF your beast be troubled with the Cough or shortnesse of breath, you shall giue him to drinke diuers Mornings together a Spoonfull or two of *Tarre* dissolued in a quart of new *Milke*, and a head of *Garlicke* cleane pild & bruised.

CHAP. XVI.

Of any impostume, bile or botch on a beast.

IF your beast be troubled with any impostume, bile or botch, you shall take *Lilly* rootes, and boyle them in *Milke* till they be soft, so that you may make them like pap, then being very hot clap it to the soare, and then when it comes to be soft, open it with a hot Iron, and let out the filth, then heale it vp with *Tarre*, *Turpentine*, and *Oyle* mixt together.

CHAP. XVII.

Of diseases in the sinewes, as weakenesse, stifnesse, or sorenesse.

IF you finde by the vnnimble going of your beast, that his sinewes are weake, shrunk or tender: Take *Mal-lowes* and *Cheekweed*, and boyle them in the drega of *Ale* or in *Vinegar*, and being very hot, lay it to the offended member, and it will comfort the sinewes.

CHAP. XVIII.

Of the generall scab, particular scab, itch, or scurfe in cattell.

IF your beast be troubled with some few scabs here and there on his body, you shall onely rub them off, and annoynt the place with blacke *Sope* and *Tarre* mixt together, and it will heale them. But if the scab be vniuersall over the body, and the scab mixt with a drie scurfe, then you shall first let the beast bloud, after rub off the scabs and scurfe till the skin bleed, then wash it with old *Urine* and greene *Copra* together, and after the bathing is dry, annoynt the body with *Beres greese* and *Brimstone* mingled together.

CHAP.

CHAP. XIX.

Of the hide-bound or drie skinne in Cattell

The cure.

THis grieve commeth of ouer-much labour and euill keeping, and aboue all other beasts your *Lincolneshire* Oxen are subiect vnto it, the signes are a discoloured and hard skinne, with much leanness: The cure is, to let him bloud, and to giue him to drinke a quart of strong Ale brewed with *Myrrhe* and the powder of *Bay Berries*, or for want of *Berries* the *Bay-tree* leaues, and then keepe him warme and feede him with *Hay* that is a little mow-burnt, and onely looketh red, but is not dusty or mouldy, for that will get him an appetite to drinke, and drinking will loosen his skinne.

CHAP. XX.

Of the diseases in the Lungs, especially the Lung-growne.

THe Lungs of a beast are much subiect to sicknesse, as may appeare by much panting and shortnesse of breath, the signes being a continuall coughing, but that which is before prescribed for the Cough will cure all these, onely for a beast which is Lung-growne, or hath his lungs growne to his side, which commeth through some extreame drought taken in the Summer season, and is knowne by the cough, hoarse or hollow coughing, you shall take a piere of *Tanners Oze*, and mixe it with a pint of new *Milke*, and one ounce of browne *Sugar candie*, and giue it the beast to drinke, this hath beene found a present cure.

CHAP. XXI.

Of biting with a mad-dog, or any other venemous beast.

IF your beast be bitten with a mad-dogge, or any other venemous beast, you shall take *Plantaine*, and beat it in a mortar with *Belearmoniake*, *Sanguis draconis*, *Barly meale*, and the whites of *Eggs*, and plaster wise lay it vnto the sore, renewing it once in fourteene houres.

CHAP.

CHAP. XXII.

Of the falling downe of the pallas of a beasts mouth.

I About and drought will make the pallas of a beasts mouth to fall downe, which you shall know by a certaine hollow chanking in his mouth, when hee would eate, also by his sighing, and a desire to eate but cannot: The cure is; you shall cast the beast, and with your hand thrust it vp, then let him bloud in the pallas, and annoint it with *Hony* and *Salt*; and put him to grasse, for he may eate no drie meate.

The cure.

CHAP. XXIII.

Of any grieve or paine in the hoose of a beast, and of the Foule.

Take *Mugwort* and beate it in a mortar with hard *Tallow*, and apply it to the hoose of the beast, and it will take away any grieve whatsoeuer. But if hee be troubled with that disease which is called the *Foule*, and commeth most commonly by treading in mans ordure, breedeth a forenesse and swelling betweene the cleyes, you shall for the cure, cast the beast, and with a *Hay-rope* rubbe him so hard betweene the same that you make him bleede, then annoynt the place with *Torre Turpentine*, and *Kuchin see*, mixt together, and keepe him out of the durt, and he will soone be whole.

The cure.

CHAP. XXIII.

Of Bruisings in generall, on what part of the body soeuer they be.

Take *Brokelempe* the lesse, and fric it with *Tallow*, and so hot lay it to the bruise, and it will either expell it, or else ripen it, breake it, and heale it, as hath beene often approued.

CHAP. XXV.

Of swallowing downe Hens-dung, or any other poysonous thing.

IF your beast haue swallowed downe *Hens-dung*, *Horse-leeches*, or any other poysonous thing, you shall take
a pinte

a pinte of strong *Vinegar*, and halfe so much *Oyle* or sweet *Butter*, and two Spoonefuls of *Treacle*, and mixing them together on the fire, giue it the beast warme to drinke, and it will cure him.

CHAP. XXVI.

Of killing Lice or Ticks.

The cure.

BEasts that are bred in woods vnder droppings of trees, or in barraine & vnwholesome places are much subiect to Lice, Ticks, and other vermine. The cure whereof is to annoint their body with fresh *Grease*, *Pepper*, *Stanesaker*, and *Quicksilver* beaten together till the *Quicksilver* be flaine.

CHAP. XXVII.

Of the Dewbolne, or generall Gargill.

HOWsoever some of our English writers are opinioned, this Dewbolne or generall Gargill is a poysonous and violent swelling, beginning at the nether part of the Dewlap, & if it be not prevented, the swelling will ascend vppward to the throat of the beast, and then it is invariable; therefore for the preservation of your beast, as soone as you see the swelling appeare, cast the beast, and slit the swelled place of the Dewlap at least foure inches in length: then take a handfull of *Speare-grasse* or *Kan-grasse*, and thrusting it into the wound, stitch it vp close, then annoynt it with *Butter* and *Sale*, and so let it rot and weare a way of it selfe: if you perceiue that his body be swelled, which is a signe that the poyson is disperst inwardly, then it shall be good to giue him a quart of *Ale* and *Kew* boyled together, and to chase him vp and downe well, both before and after.

CHAP. XXVIII.

Of the losse of the Cud.

A Beast will many times through carelesnesse in chawing, loose his Cudde, and then mourne and leaue to

eate:

eat: The cure whereof is, to take a little sowre *Leauen* The cure.
and *Salte*, and beating it in a mortar with mans *Urine* and
Lime, make a pretty bigge ball, and force him to swallow
it downe, and it will recouer his *Cudde*.

CHAP. XXIX.

Of killing of all sorts of wormes, either in Oxe, Cow, or Calfe.

THere is nothing killeth wormes in the bodies of cat-
tell sooner then *Sanen* chopt small and beaten with
sweet *Butter*, and so giuen in round balls to the beast, nor
any thing maketh them voyde them so soone as sweet
Wort and a little *Sope* mixt together and giuen the beast
to drinke.

CHAP. XXX.

Of the vomiting of blood.

THis disease commeth through ranknesse of blood,
got in fruitfull pastures after hard keepings, insomuch
that you shall see the blood flow from their mouthes.
The cure is, first to let the beast blood, and then giue to The cure.
drinke *Bolearmanike* and *Ale* mixt together.

CHAP. XXXI.

Of the Gout in Cattell.

If your beast be troubled with the Gout, which you
shall know by the sodaine swelling of his ioynts and fal-
ling againe, you shall take *Galingall*, and boyle it in the
dregs of *Ale* and sweet *Butter*, and pulvis-wise lay it to the
offended member.

CHAP. XXXII.

Of milking of a beast.

Milking is when a beast will oft fall, and oft rise as he is
at his labour, and cannot indure to stand any while
together: it proceedeth from some stroake or bruise ei-
ther by cudgell or other blunt weapon: And the cure is, The cure.
not to raise him sodainly, but to giue him *Ale* and some
Pitch mixt together to drinke.

CHAP. XXXIII.

Of prouoking a beast to pisse.

IF your beast cannot pisse, sleepe *Smallage* in a quart of *Ale*, and giue it him to drinke, and it presently helpeth.

CHAP. XXXIII.

Of the ouerflowing of the Gall in beasts.

The cure.

THe ouerflowing of the Gall is euer knowne by the yellownesse of the skinne and the eyes of the beast: And the cure is, to giue him a quart of *Milke*, *Saffron*, and *Turmericke* mixt together to drinke after hee hath beene let bloud, and so doe three mornings together.

CHAP. XXXV.

Of a beast that is goared either with a stake, or the horne of another beast.

TAke *Turpenine* and *Oyle*, & heate them on the coales, and then taint the wound therewith, & it will heale it.

CHAP. XXXVI.

Of a Cow that is whetherd.

THis disease is when a Cow after her caluing cannot cast her cleaning, and therefore to compell her to cast it, you shall take the iuyce of *Bettony*, *Mugwort*, and *Mallows*, of each three Spoonefuls, & mixe it with a quart of *Ale*, and giue it the beast to drinke: and also giue her to eate scorched *Barly*, and it will force her to auoide her burthen sodainly.

CHAP. XXXVII.

Of drawing out Tharves or Stubbes.

TAke blacke *Snayles* and blacke *Sope*, and beat them to a salue, and apply them to the sore, and it will draw the griefe to be apparant.

CHAP. XXXVIII.

Of purging of Cattell.

THere is nothing doth purge a beast so naturally, as the greene weedy grasse which groweth in Orchards vnder

vnder trees; nor any medicine doth purge them better then Tarre, Butter, and Sugarcandy mint together, and giuen in bals as big as an Hennes Egge.

CHAP. XXXIX.

Of being shrew-runne, or shrew-bitten.

A Shrew Moule, which is a Moule with short wnechen legges, and a long head, like a swine, is a venomous thing, and if it bite a beast, the sore will swell, and rankle, and put the beast in danger; but if it onely runne ouer a beast it faebleth his hinder parts, and maketh him vnable to goe: the cure then for being shrew-bitten, is the same which is formerly shewed for the biting of other venomous beasts: but if he be shrew-runne, you shall onely draw him vnder, or beate him with, a Bramble which groweth at both ends in the Furrowes of Corne lands.

The cure.

CHAP. XL.

Of faintnesse in labour.

IF your beast in his labour, and heate of the day, chance to faint, you shall loose him, and drive him to the running streame to drinke, and then giue him two or three *oppines* full of parcht Barley to eate, and hee will labour fresh againe.

CHAP. XLI.

Of breeding milke in a Cow.

IF your Cow after her calving cannot let downe her milke, you shall giue her a quart of strong posset Ale mixt with *Annis-seedes*, and *Collander-seedes*, beaten to powder, to drinke euery morning, and it will not onely make her milke spring, but also increase it wonderfully.

CHAP. XLII.

Of bones out of ioynt, or bones broken.

IF any beast haue a bone broken, or misplaced, after you haue set it right, and in his true place; you shall wrappe a plaister about it, made of *Burgundy Pitch*, *Tal-*

is their wooll courser then that of *Cotſall*. *Lincolneſhire*, eſpecially in the ſalt Marſhes, haue the largeſt Sheepe, but not the beſt Wooll, for their legges and bellies are long and naked, and their Staple is courser then any other: the Sheepe in *Yorkeſhire*, and ſo Northward, are of reaſonable bigger bone, but of a Staple rough and hairy; and the *Welſh* Sheepe are of all the worſt, for they are both ſittle, and of worſe Staple; and indeed, are praized onely in the diſh, for they are the ſweeteſt Mutton.

Of the
choiſe of
Sheepe.

Of the
Leare.

If now, knowing the natures and properties of the Sheepe of every Country, you goe about to ſtocke your ground, be ſure to bring your Sheepe from a worſer ſoyle to a better, and not from a better to a worſe. The Leare, which is the earth on which a Sheepe lyeth, and giueth him his colour, is much to be reſpected: the red Leare is held the beſt, the Duſkiſh, inclining to a little redneſſe, is tollerable, but the white or durty Leare ſtarke naught. In the choiſe therefore of your Sheepe, chuſe the biggeſt boned, with the beſt Wooll; the Staple being ſoft, greaſie, well curled, and cloſe together, ſo that a man ſhall haue much a doe to part it with his fingers. Theſe Sheepe beſides the bearing of the beſt burthen, are alwayes the beſt Butchers ware, and goe ſooneſt away in the Market. Therefore, in the choiſe of Sheepe for your breed, haue a principall reſpect to your Rammes, for they euer marre or make a flocke: let them then as neere as you can, haue theſe properties or ſhapes. Firſt, large of body in every generall part, with a long body, and a large belly; his forehead would be broad, round, and well riſing; a cheerefull large eye, ſtraight ſhort noſtrils, and a very ſmall muzell, by no meanes any hornes, for the dodder Sheepe is the beſt breeder, and his iſſue neuer dangereth the Damme in yeaning, as the horned Sheepe doe:

The ſhape
of a Sheepe.

doe: besides, those Sheepe which haue no hornes, are of such strength of head, that they haue oft beene seene to kill those Sheepe which haue the largest hornes and best wrinkled: a Sheepe would haue a large vpright necke, somewhat bending like the neck of a Horse, a very broad backe, round buttockes, a thicke talle, and short ioynted legges, small, cleane, & nimble, his Wooll would be thick, and deepe, couering his belly all ouer; also, his face, and euen to his nostrils, and so downwards to his very knees and hinder houghes. And thus, according to the shape, properties and soyle, from whence you chuse your Rams chuse the rest of your flocke also.

The best time for your Ewes to bring forth their young ones, is, if they be Pasture-Sheepe, about the latter end of *April*, and so vntill the beginning of *June*; but if they be Field-Sheepe, then from the beginning of *January*, till the end of *March*, that their Lambes may be strong and able before *May* day, to follow their Dams ouer the rough Fallow lands, and water furrowes, which weak Lambes are not able to doe; and although to yeane thus early in the winter, when there is no grasse springing, and the sharpenesse of the weather also be dangerous, yet the Husbandman must prouide shelter and sweet fodder, and the Shepheard with great vigilance be stirring at all houres to preuent euils, for the reasons before shewed: and though the Ewe at the first be scant of Milke, yet as the warme weather increaseth, and the grasse beginnieth to Spring, so will her Milke spring also.

Now for your Lambes: about *Michaelmasse* you shall seperate the male from the female; and hauing chosen out the worthiest, which you meane to keepe for Rams, put them aside, and then gueld the rest, which euery orderly Shepheard can doe sufficiently; for there is no

When Ewes
should
bring forth.

Ordering
of Lambes.

low, and *Linfeede* oyle, and then splint it, and let it remaine
vpon bound *thirteen* dayes.

CHAP. XLIII.

Of the rot in Beasts.

IF your beast be subiect to rottenesse, which you may
know by his leanness, milke, and continuall scouring
behinde: you shall take *Bay-berries*, beaten to powder,
Myrrhe, *Iuge leaues*, *Elder leaues*, and *Feather-sewe*, a good
lumpe of dry *Clay*, and *Bay salt*, mixe these together in
strong *Urine*, and being warme, giue the beast halfe a pint
thereof to drinke, and it will knit and preserve them.

CHAP. XLIIII.

Of the Pantas.

The cure.

THe *Pantas* is a very faint disease; and maketh a beast
to sweat, shake, and pant much. The cure is, to giue
him in *Ale* and *Urine*, mixt together, a little *Soote*, and a
little earning to drinke, two or three mornings before you
labour him.

CHAP. XLV.

Of all manner of wounds in beasts.

TO cure any wounds in Beasts given by Edge-toole,
or otherwise, where the skin is broke; take *Hogges-
grease*, *Tarre*, *Turpentine*, and *Waxe*, of each a like quan-
tity; and a quarter so much *Kendigrease*, and melt them
all together into one *Salme*, and apply it to the wound,
by spreading it vpon a cloath, and it will heale it without
any ranke, or dead flesh.

The end of the Bull, Oxe, Cow, and Calf.

Of Sheepe.

CHAPTER. I.

Of Sheepe in generall, their use, choise, shape and preseruation.

IF I enter into any long discourse of the praise or profit of Sheepe, or to shew my reading by relation of the Sheepe of other Countries were frivolous, because I am to write much in a very little Paper; and I speake onely to my Countrey men the English, who, desire to learne and know their owne profit. Know then, that whosoever will stocke himselfe with good Sheepe must looke into the nature of the soyle in which hee liueth: for Sheepe according to the Earth and Ayre in which they liue, doe alter their natures and properties: the barraine Sheepe becomming good in good soyles, and the good Sheepe barraine in euill soyles. If then you desire to haue Sheepe of a curious fine Staple of Wooll, from whence you may draw a thread as fine as like, you shall see such in *Hereford-shire*, about *Lempster* side, and other speciall parts of that Countrey; in that part of *Worstershire*, ioyning vpon *Shropshire*, and many such like places, yet these Sheepe are very little of bone, blacke faced, and beare a very little burthen. The Sheepe vpon *Cosfall* hills are of better bone, shape & burthen, but their Staple is courser and deeper. The Sheepe in that part of *Worstershire*, which ioyneeth on *Warwickshire*, and many parts of *Warwickshire*, all *Leicestershire*, *Buckinghamshire*, and part of *Northamptonshire*; and that part of *Nottinghamshire*, which is exempt from the Forrest of *Sherwood*, beareth a large boned Sheepe, of the best shape and deepest Staple; chiefly if they be Pasture Sheepe; yet

is:

is their wooll courser then that of *Cotſall*. *Lincolne-shire*, especially in the salt Marſhes, haue the largest Sheepe, but not the best Wooll, for their legges and bellies are long and naked, and their Staple is courser then any other: the Sheepe in *Yorkeſhire*, and so Northward, are of reasonable bigger bone, but of a Staple rough and hairy: and the *Welſh* Sheepe are of all the worst, for they are both little, and of worse Staple; and indeed, are praised onely in the dish, for they are the sweetest Matton.

Of the
choiſe of
Sheepe.

Of the
Leare.

If now, knowing the natures and properties of the Sheepe of euery Country, you goe about to stocke your ground, be sure to bring your Sheepe from a worser soyle to a better, and not from a better to a worse. The Leare, which is the earth on which a Sheepe lyeth, and giueth him his colour, is much to be respected: the red Leare is held the best, the Duskyish, inclining to a little rednesse, is tollerable, but the white or dirty Leare starke naught. In the choiſe therefore of your Sheepe, chuse the biggest boned, with the best Wooll; the Staple being soft, greasie, well curled, and close together, so that a man shall haue much a doe to part it with his fingers. These Sheepe besides the bearing of the best burthen, are alwayes the best Butchers ware, and goe soonest away in the Market. Therefore, in the choiſe of Sheepe for your breed, haue a principall respect to your Rammes, for they euer marre or make a flocke: let them then as neere as you can, haue these properties or shapes. First, large of body in euery generall part, with a long body, and a large belly; his forehead would be broad, round, and well rising; a cheerefull large eye, straight short nostrils, and a very small muzell, by no meanes any hornes, for the dodder Sheepe is the best breeder, and his issue neuer dangereth the Damme in yeaning as the horned Sheepe doe:

The shape
of a Sheepe.

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When Ewes should bring forth,

Ordering of Lambes.

danger in gelding yong Lambes. The first yeare a male Lambe is called a weather-Hog, and a female Lambe an Ewe-Hog: the second yeare the male is a weather, and the female a Theafe, & the she may be put to the Ram; but if you let her goe ouer that yeere also, then shee is a double Theafe, and will both her selfe be the goodlier Sheepe, & also bring forth the goodlier Lambe; whence it comes, that the best Sheepe-masters make more account of the double Theafe then of any other breeder.

Needful observations.

You shall obserue neuer to sheare your Lambes till they be full Hogs: you shall euer wash three dayes before you sheare: the best time of shearing is from *June* to *August*; Ewes are euer good breeders from thre yeres old till their mouthes breake. If you would haue your Ewes bring forth Male Lambes, note when the Northwinde bloweth, & driuing your Flock against the winde: let your Rammes ride as they goe, and this will make the Ewes to conceiue Male Lambes. So likewise, if you would haue female Lambes, put your Rammes to the Ewes when the winde bloweth out of the South.

he preferuation of Sheepe.

Now for the generall preferuation of Sheep, feed them as much as you can vpon high grounds, which are dried and fruitfull, the grasse sweet, yet so short that it must be got with much labour: but if you must force perforce feed vpon low and moyst grounds, which are infectious, you shall not bring your Sheepe from the Fold (for I now speake to the honest English Husbandman) vntill the Sunne be risen, and that the beames beginne to draw the dew from the earth; then hauing let them forth, drine them to their place of feede, & there, with your dog, chase them vp and down till they be weary, and then let them either feed or take their rest, which they please: this chasing, first, beateth away mill-dewes, and all other dewes from

from the earth, as also those webs, kels, and flakes which lying on the earth, and a sheepe licking them vp, do breed rottenesse: also, this chaling stirreth vp that naturall heate in a sheepe, which drinketh vp, and wasteth the abundance of moisture, which else would turne to rottenesse. Besides, a sheepe being thus chafed and wearied, will fall to his food more deliberately, and not with such greedinesse as otherwise he would, and also make choise of that meat which is best for his health. If a Shepheard once in a moneth, or alwayes when he hath occasion to handle his Sheepe, rub their mouthes with *Bay Salt*, it is excellent preferuation against all manner of sicknesse, and very comfortable for a Sheepe also: for, a sheepe will very well liue, and not abate of his flesh by rubbing his mouth once a day with *Bay Salt* onely. Now, for as much as, notwithstanding these principles, a Sheepe falleth into many infirmities, hereafter followeth the severall cures of all manner of diseases.

CHAP. II.

The signes to know a sound Sheepe, and an vnfound Sheepe.

IF a Sheepe be sound and perfit, his eye will be bright and cheerefull, the white pure without spot, and the strings red, his gums also will be red, his teeth white and even, his skin on his brisket will be red, and so will each side betwixt his body and his shoulder where Wooll growes not, his skinne in generall will be loose, his Wooll fast, his breath long, and his feet not hot; but if he be vnfound, then these signes will haue contrary faces, his eyes will be heauy, pale and spotted, his breast and gums white, his teeth yellow and foule, his Wooll when it is pulled will easily part from his body; and when hee is dead open him and you shall finde his belly full of water, his fat yellow, his Liuer putrified, and his flesh moyst and warrish.

CHAP. III.

Of sicknesse in generall, or the Feauer amongst Sheepe.

CHange of Pasture is a great cure for sicke Sheepe, yet if you finde any more particularly troubled then the rest: Take *Puliol* royall, and stamping it, mixe the iuyce with *Water* and *Vinegar* the quantitie of halfe a pinte, and giue it the Sheepe with a horne luke warme; and by no meanes let the sheepe be much chaf't: also in these sickneses the Shepheard must haue a great care to note from whence the disease groweth, if it proceede from cold, then to driue his sheepe to slaughter, if from heat, then to feed them in shady and coole places.

CHAP. IIII.

Of the generall Scab or Itch in Sheepe.

THis generall Scab or Itch in Sheepe is of all diseases the most common among them; proceeding from rayny and wet weather, which falling vpon their skins, if they happen to be chaf't or heated after, they presently breake forth into the scab, which you shall know by a white filthy scurse sticking vpon their skins: and the most vsuall medicine for the same, which all Shepherds vse, is to annoint the place with *Tarre* and *Grease* mixt together, but if vpon the first appearance of the Itch, you steepe *Pulioll Royall* in water, and wash the skinn therewith, it will keepe them from running into the scabbe.

CHAP. V.

Of killing Maggots in Sheepe.

IF a Sheepe be troubled with Maggots, you shall take *Goose-grease*, *Tarre* and *Brimstone*, and mixe them together on the fire, and then annoint the place therewith, and it will kill the Maggots.

CHAP. VI.

Of the red Water.

THe red water is a poysonous disease in Sheepe, offending the heart, & is indeede as the pestilence amongst other cattell: therefore when you finde any of your sheepe infected therewith, you shall first let him bloud in the foote betweene the clawes, and also vnder the tayle, and then lay to the sore places *Rew* or *Wormewood* beaten with bay *Salt*, and it helpeth.

CHAP. VII.

Of Lung-sicke, or any Cough or Cold.

IF your Sheepe be troubled with any sicknesse in his Lungs, which you shall know by his coughing and shortnesse of breath, you shall take *Tussilaginis* and *Lungwort*, and stamping them, straine the iuyce into a little *Hony* and *Water*, and giue it the Sheepe to drinke.

CHAP. VIII.

Of the worme in the Claw of the Sheepe or any other part.

THis Worme breedeth commonly before, betweene the clawes of the foote: but wheresoeuer it breedeth, it is knowne by the head, which is like a tuft of haire, and will sticke forth in a bunch. The cure is, to slit the foote, and draw out the worme without breaking it: and then annoint the place with *Tarre* and *Tallow* mixt together, for *Tarre* simply of it selfe will draw too much. The cure.

CHAP. IX.

Of the wildfire in Sheepe.

THIS disease which is called the wildfire, is a very infectious sicknes, and will indanger the whole flocke; but howsoeuer incurable it is held, yet it is certaine, that if you take *Cheruile*, and stamping it with old *Ale*, make a salve thereof, and annoynt the sore therewith, it will kill the fire, and set the Sheepe safe: and, though some, for this disease, bury the first infected Sheepe aliue, with

his

his heeles vpward, before the sheepe Coat doore, yet this medicine hath beene ever found more effectuall.

CHAP. X.

Of the diseases of the Gall, as Choller, Iauundise, and such like.

The cure.

THese diseases are knowne by the yellownesse of the Sheepes skinne: And the cure is, to take *Plantaine* and *Lettice*, and stamping them together, mixe their iuyce with *Vinegar*, and giue halfe a pinte to a Sheepe to drinke.

CHAP. XI.

Of the tough fleame, or stopping in Sheepe.

IF your Sheepe be stopt in the head, breast, or wessand, either with tough fleame or other cold humours, which you shall know by the running of the nostrils, then take the poulder of *Paliott-royall*, and mixing it with clarified *Hony*, dissolve it in warme water the quantity of halfe a pinte, and giue it the Sheepe to drinke, and it will loosen the fleame.

CHAP. XII.

Of broken bones in Sheepe, or bones out of ioynt.

IF your Sheepe chance to breake a legge, or haue any other bone misplaced, you shall after you haue set it straight and right againe: first bathe it with *Oyle & Wine*, and then dipping a cloth in molten *Patch grease*, roule it about, and splint it as occasion shall serue, and so let it remaine nine daies, and dresse it againe, and at the end of the next nine daies, the sheepe will be able to goe.

CHAP. XIII.

Of any sicknesse in Lambes.

IF your Lambe be sicke, you shall giue it *Mares-milke*, or *Goats-milke*, or the own dammes *Milke* mixt with water to drinke, and keepe it very warme.

CHAP.

CHAP. XIII.

Of the Sturdy, Turning-will, or More-sound.

THese diseases proceede from ranckenesse of blood, which offendeth the braine and other inward parts. The cure then is to let the sheepe blood in the eye veines, temple veines, and through the nostrils, then to rub the places with young Nettles bruised. The cure.

CHAP. XV.

Of diseases in the eyes, as the Haw, dimnesse, or any sorenesse.

IF your sheepe haue any imperfection in his eyes, you shall drop the iuyce of *Selandine* into them, and it is a present helpe.

CHAP. XVI.

Of water in a Sheepes belly.

IF a sheepe haue water in his belly between the outward flesh and the rimme, then you may safely aduenture to let it forth by making a little hole through the flesh, and putting in a quill, but if it be betweene the rimme and the bagge, then it is incurable; for you may by no meanes cut the rimme asunder: when the water is let forth, you shall stich vp the hole, and annoynt it with *Tarre* and *Butter* mixt together. This water if it remaine in the body will rot the sheepe.

CHAP. XVII.

Of the tagd or belt Sheepe.

A Sheepe is said to be tagd or belt, when by a continuall squirt running out of his ordure, hee berayeth his tayle, in such wise that through the heat of the dung it scaldeth, and breedeth the scabbe therein. The cure is, The cure. with a paire of sheares to cut away the tags, and to lay the fore bare and raw, and then to throw earth dried vpon it, and after that *Tarre* and *Goose-grease* mixt together.

CHAP.

CHAP. XVIII.

Of the Poxe in Sheepe.

The cure.

THE Poxe in sheepe are small red pimples like purples rising on the skin, and they are infectious. The cure is, to take *Rosemary* and boyle the leaues in *Vinegar*, and bathe the sores therewith, and it will heale them: change of pasture is good for this disease, and you shall also separate the sicke from the sound.

CHAP. XIX.

Of the wood-euill or Crampe.

The cure.

THIS disease is weakenesse or straining of the sinewes, got by colds and surfets: it is very mortall, and will run through a whole flocke. The cure is, to take *Cinkfoyle* or *Fine-leau'd grasse*, and boyle it in wine, and giue the sheepe a pinte therof to drinke, and keepe him warme, and chafe his legges with *Oyle* and *Vinegar*.

CHAP. XX.

Of making an Ewe to loue her owne Lambe, or any other Ewes Lambe.

IF an Ewe grow vnnaturall, and will not take to her Lambe after she hath yeaned it, you shall take a little of the cleane of the Ewe, which is the bed in which the Lambe lay, and force the Ewe to eat it, or at least chew it in her mouth, and she will fall to loue it naturally: but if an Ewe haue cast her Lambe, and you would haue her take to another Ewes Lambe, you shall take the Lambe which is dead, and with it rub and daube the liue Lambe all ouer; and so put it to the Ewe, and she will take as naturally to it as if it were her owne.

CHAP. XXI.

Of licking vp poyson.

The cure.

IF a sheepe chance to licke vp any poyson, you shall perceiue it by a sodaine swelling and reeling of the sheepe. And the cure is, as soone as you see it stagger, to open

open the mouth, and you shall finde one or moe blisters vpon the tongue rootes, you shall presently breake them with your fingers, and rubbe them with *Earth*, or *Sage*, and then pisse into the sheepes mouth, and it will doe well.

CHAP. XXII.

Of Lambes yeaned sicke.

IF a Lambe be yeaned sicke and weake, the Shepheard shall fold it vp in his Cloake, blow into the mouth of it, and then drawing the dams dugs, squirt *Milke* into the mouth of it.

CHAP. XXIII.

Of making an Ewe to be easily deliuered.

IF an Ewe can hardly bring forth or yeane her Lambe, you shall take *Balsamite* or *Horse mint*, and put either the iuyce or powder of it into a little strong Ale, and giue it the Ewe to drinke, and she will yeane presently.

CHAP. XXIIII.

Of teeth loose.

IF a sheepes teeth be loose, let him bloud in his gums, and vnder his taile, and then rub his teeth with *Earth*, *Salt* and *Sage*.

CHAP. XXV.

Of increasing Milke in Ewes.

Nothing increaseth Milke in Ewes more then change of Pasture and feeding: driving them one while to the Hills, another while to the Valleyes: and where the Grasse is sweetest and the Sheepe eateth with best appetite, there see you continue longest: for touching giuing them *Fitches*, *Dill*, *Anni seedes*, and such like, this change of ground will make milke spring much better.

CHAP. XXVI.

Of the Staggers, or lease sicknesse in Lambs, or elder Sheepe.

The cure.

The Staggers is ingendred in Sheepe by fortetting on Oake leaues, Hawthorne leaues, or such like, which Lambes are very apt vnto: it is a colde corrupt bloud, or fleame, gathered together about the braine: and indeed is suddenly mortall. The best cure is, to take *Asafetida*, and dissolue it in warme water, and put the quantitie of halfe a spoonefull into each eare of the Sheepe or Lambe, and it is a present remedy.

CHAP. XXVII.

Of wormes in the guts of Sheepe or Lambes.

The cure.

Sheepe are as subiect to wormes in their guts and stomackes, as any other cattell whatsoever; which you shall know by beating their bellies with their feete, and by looking continually at their bellies. The cure is, to take the leaues of *Coliander*, and to stampe them, and then mixing the iuyce thereof with *Hony*, to giue it the Sheepe to drinke, and then chase him a little, and keepe him two or three houres fasting.

CHAP. XXVIII.

Of the losse of the Cudde.

That which helpeth the losse of the Cudde in Oxe or Cow, the same is a present remedy for sheepe, and is spoke of before in a former Chapter.

CHAP. XXIX.

Of saving Sheepe from the rot.

This disease of rottennesse is the cruellest of all other amongst Sheepe, and extendeth his violence over all the flocks; nay, over Towneships and Countries: and though it be held of most men incurable, yet good gouernement, and this receipt I shall deliuer you, will not onely prevent it, but preserue your Sheepe safe: therefore, as soone as you perceiue that any of your
Sheepe

Sheepe are tainted, you shall take *Adrases*, which is a certaine salt, gathered from the salt Marches, in the heat of Summer, when the tide is going away, and leaving certaine drops of salt water on the grasse, then the violent heat of the Sunne turnes it to salt: and to speake briefly, all salt made by the violence of the Sunnes heat, onely, is taken for *Adrases*, of which there is infinite store in *Spaine*. With this *Adrases* rub the mowthes of all your Sheepe once a weeke and you shall neuer neede to feare the rotting of them, for it hath beene well tried; and as I imagine, the experiment was found out from this ground. It is a rule, and well knowne at this day in *Lincolneshire*, and in *Kent*, that vpon the salt Marshes sheepe did neuer die of the rot; no other reason being knowne therefore, but the licking vp of that salt, and without doubt, it is most infallible and most easie.

CHAP. XXX.

A few precepts for the Shepheard.

[T is meete that euery good and carefull Shepheard know what food is good for Sheepe, what hurtfull; that following the one, and eschewing the other, he may euer keepe his Cattell in health. The grasse that is most wholesome for sheepe, is that which hath growing in it good store of *Mellilot*, *Clauer*, *Selfe-heale*, *Cynckesoile*, *Brome*, *Pympernell*, and white *Henband*.

The grasse which is vnwholesome for Sheepe, is that which hath growing amongst it, *Spearewort*, *Pennywort*, or *Penny-grasse*, and any weede which grow from inundations or ouerflowes of water; likewise, *Knot-grasse* is not good, nor *Mildewd grasse*. Of all rots the hungar-rot is the worst, for it both putrieth the flesh and skin, and this is most incident to field-Sheepe, for to Pasture-Sheepe it neuer hapneth. The next rot to it, is the *Pelt-rot*, which commeth by great store of raine, immediately

after a Sheepe is new shorne, which mildewing the skin, corrupteth the body; and this also is most incident to field-sheepe, which want shelter.

There be little white Snayles which a Sheepe will lick vp, and they will soone rot him.

There will grow vpon an Ewes teats little drie scabs, which will stop their Milke; when the Lambes sucke, the Shepheard must haue care to pull them away.

A Sheepe will haue a bladder of water vnder his chin sometimes, which the Shepheard must be carefull to let out and lance, or the sheepe will not prosper.

It is good not to sheare sheepe before Midsummer, for the more he sweateth in his wooll, the better and more kindly it is.

If you will know the age of your sheepe, looke in his mouth, and when he is one sheare he will haue two broad teeth afore; when hee is two sheare, he will haue foure broad teeth afore; when he is three, he will haue sixe, and when he is foure sheare, he will haue eight; and after those yeeres his mouth will begin to breake: for, touching that rule of the euennesse and vneuenesse of the mouth, it is vncertaine, and faileth vpon many occasions.

The end of the Sheepe.

Of Goates.

CHAPTER. I.

Of Goates, and of their Nature.



Seeing Goates are not of any generall vse in our Kingdome, but onely nourished in some wilde & barraine places, where Cattell of better profit can hardly be maintained, as in the mountainous

mountainous parts of *Wales*, in the barrenest parts of *Cornwall* and *Deuonshire*, on *Malborne* hills, and some few about the *Peake*: I will not stand vpon any large discourse, but as briefly as I can giue you their natures and cures. You shall then know, that the Goate is a beast of a hot, strong, and lusty constitution; especially in the act of generation, that they exceed all other Cattell: they delight to liue in Mountaines that be high, craggy, and full of Bushes, Bryars, and other wood; they will feed in any plaine pastures, but their speciall delight is in brouling vpon trees, they are so nimble of foot, that they will goe in places of greatest danger. The profit which cometh from them, is their Milke, which is an excellent restorative, and their Kids which are an excellent Venison.

The nature
of Goates.

For the shape of the Goate: he would haue a large body, and well hayred, great legs, vpright ioynts, not bending, a necke plaine and short, a head small and slender, large hornes, and bending, a big eye, and a long beard, and his colour white, blacke, or pide. Some doe vse to sheare them, to make rough mantles of; but it is not so with vs in *England*. The Shee-Goate would haue large teates, and big vdder, hanging eares, and no hornes, as they haue in many places.

His shape.

These Goates would be kept in small flockes, or heardes, as not aboue a hundred in a heard: as they must in the heate of Sommer haue much shade, so in the Winter likewise much shelter, for they can neither endure extremity of heate nor cold; especially, the violence of Winter, for that will make the Shee-Goate cast her Kid, or bring it forth vntimely. These loue Mast well, but yet you must giue them other foode to mixe with it. The best time to let the male and female goe together, is about the beginning of *December*. If you house Goates,

The ordering
of
Goates.

in the Winter, let them haue no litter to lye on, but the floore paved, or gravelled, for otherwise, their owne hear will annoy them: they must also be kept very cleanly, for they can endure no filthy saours. For the young Kids, you shall in all points order them as you doe your Lambes. Now, for their preseruatiō; if they be suffered to goe and chuse their owne food, they are to themselves so good phyficians, that they will seldome or neuer be troubled with any inward sicknesse; onely the vn-naturall excesse of their lust maketh them grow soon old, and so both past vse and profit. For those particular diseases which accidentally fall vpon them: here followeth the Cures.

CHAP. II.

Of the pestilence in Goates, or any inward and hidden sicknesse.

The cure.

IF you perceiue your Goates to droope, or looke with sullen or sad countenances, it is an assured signe of sicknesse; but if they foame or lather at the mouth, then it is a signe of the pestilence. The cure is, first, to seperate them from the sound, then to let them bloud, and giue them the Buds and Leaues of *Celodine*, with rushes and reedes to eate, and it is a present remedy.

CHAP. III.

Of the dropsie in Goates.

The cure.

GOates are very much subiect vnto the Dropsie, through their excesse drinking of water; the signe whereof is a great inflammation and heate in the skin: the cure is, to seeth *Wormewood* in *Water* and *Salt*, and giue a pint thereof to the Goate to drinke diuers mornings, for to slit and let out the water vnder the shoulder, is not so certaine and safe a cure.

CHAP.

CHAP. IIII.

Of stopping the teats.

THere will ingender in the teats of Goats a certaine tough hard fleame which will stop the Milke from issuing; which to cure, you shall with your finger and your thumbe pull it away, and then annoint the place with *Hony*, and the *Goates Milke* mixt together.

The cure.

CHAP. V.

Of Goates that cannot Kidde.

GOates aboue other Cattell, are troubled with hardnesse in Kidding; by reason that if they be chased or hunted, their Kids will turne in their bellies: the remedy then to preserve them from that danger, is to keep them quiet and vntroubled vntill they haue Kided.

CHAP. VI.

Of the tetter, or drie scab in Goates.

TO heale any Tetter, or drie scabbe in Goates, take *Blacke-Soape*, *Tarre*, *Hogs grease*, and *Brimstone*, mixe them well together, and annoint the sores therewith, and it will heale them.

CHAP. VII.

Of gelding Riddes in the Sommer season.

Kids being guelt in the Sommer season, as those which are late kidded must necessarily be; the Flie will be so busie with the soare, that with their blowings they will breed such store of Maggots in the wound, that it will endanger their liues: to defend them then from such annoyance of the Flie, you shall take *Soote*, *Tarre*, and thicke *Creame*, and mixe them well together, and annoint the wound therewith, and it will both heale it, and keepe the Flie away.

CHAP. VIII.

Of the Itch in Goates.

IF your Goates be troubled with an Itch, so that they cannot feed for clawing and biting themselves, you shall wash

wash their skins with old *Chamber-lye*, and greene *Coparas* well boyled together, and it will kill the Itch.

CHAP. IX.

Of the Tuell stopping in Goates.

The cure.

Goates when they are sucking on their dammes, or when they are new Kiddled, will commonly haue a great laxe or squirt, so that the ordure which commeth from them, if it be not well cleansed & taken from them, it will with their owne naturall heate so bake and dry, that it will stop vp their Tuels, so that they cannot dung, which if it be not holpen, the Kidde will die. The cure is, to cleanse the place, and open the Tuell, and then put into it an inch or there about of a small *Candles* end dipt in *Honey*, and then annoint all the Tuell ouer with *Capons grease*.

CHAP. X.

Of the Staggers, or Reeling euill in Goates.

IF your Goates be troubled with the Staggers or Reeling euill, which is a disease bred in them by the violent heat of the Sunne, you shall take *Bay Salt* and *Verduyce*, and mixe them together, and giue the Goate halfe a pint thereof to drinke; or else take *House-lecke*, and *Dragons*, of each a like, some grounds of *Ale*, with a little new *Milke*, stampe the hearbs, and then mingle them together, then put thereto a few *Genes* grossely beaten, and then boyle it againe, then coole it, and giue the sicke Goate three or foure spoonesful thereof to drinke, and it will cure her. Now for any other infirmities which shall happen vnto Goates, you may cure them with the same medicines which you cure sheepe, for their natures doe not much differ.

The end of the Goate.

Of

Of Swine.

CHAPTER. I.

*Of all manner of Swine, their natures, vse, shapes, and pre-
servations.*



Although Swine are accounted troublesome, noysome, unruly, and great ravenous, as indeed their natures are not much differing from such qualities, yet the vtility and profit of them, will easily wipe off those offences; for to speake truly of the Swine, he is the Husbandmans best scauenger, and the Huswiues most wholesome sinke, for his food and living is by that which would else rot in the yard, make it beastly, and breed no good manure, or being cast downe the ordinary sinke in the house breed noysome smels, corruption, and infection: for from the Husbandman hee taketh Pulse, Chaffe, Barne-dust, Mans ordure, Garbage, and the weedes of his yard, and from the Huswife her Draffe, Swillings, Whey, washing of Tubs, and such like, with which he will liue and keepe a good state of body, very sufficiently, and though he is counted good in no place but the dish onely, yet there he is so lovely and so wholesome, that all other faults may be borne with. He is by nature greedy, giuen much to roote vp grounds, and teare downe fences, he is very lecherous, and in that act tedious and brutish: he is subiect to much anger, and the fight of the Boares is exceeding mortall: they can by no meanes endure stormes, windes, or foule weather, they are excellent obseruers of their owne homes, and exceeding great louers one of another: so that they will die vpon any beast that offendeth their fellowes.

Now touching the choyse of Swine, you shall vnder-

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stand

Of the
choyse and
shape of
Swine.

stand that no Countrey in *England* breedeth naturally better Swine one then another, but if the race and keeping be alike, the proportion and goodnesse will be alike: therefore in the choyse of your Swine, chiefly the Boares and Soves which you breed of, let them be long and large of body, deepe sided, and deep bellied, thick thighes, and short legges, for though the long legged Swine appeare a goodly beast, yet he but coufereth the eye, and is not so profitable to the Butcher: high clawes, thicke necke, a short and strong groyne, and a good thick chine well set with strong bristles: the colour is best which is all of one peece, as all white, or all fanded, the pides are the worst and most apt to take the Meazels, the black is tolerable, but our Kingdome through the coldnesse breedeth them seldome.

The vse and
profit of
Swine.

The vse and profit of Swine is only (as the Husbandman saith) for the roose, which is Bacon, for the spir which is Porke, Sowse and Puddings, and for breede, which is their Pigs onely. To have too many Soves in a yard is not good; for their increafe, and bringing forth is so great, that they will for want of foode eat one another: A Sow will bring forth Pigs three times in a yeere, namely at the end of every ten weekes, and the numbers are great which they will bring forth: for I have known one Sow have twenty Pigs at one litter, twelve, fourteen and sixteene are very common; yet a Sow can bring vp no more Pigs then she hath Teats, therefore looke how many she hath, and so many Pigs preferue of the best, the rest cast away, or put to other Soves which want, yet give sucke. A Sow will bring Pigs from one yeare olde, till she be seauen yeares old: The Pigs which you reare after you have chosen the best for Boares or Soves to breed on, geld the rest both males and females: the males will

will make goodly Hogs, which are excellent Bacon or Porke, and the females which are called spayd-guils, will do the like; and breed a great deale more grease in their bodies, whence it comes that the Husbandman esteemes one spayd-guilt before two Hogs. Young shotts which are Swine of three quarters, or but one yeere old, are the daintiest Porke.

Now for the preservation of Swine, it is contained in their government and food, and is all that belongeth to the office of the Swine-herd. The orderliest feeding of Swine is, (when you keepe them, but in good state of body, and not seeke to fat them) in the morning early when you vnlie them is to giue them Draffe, Pulse, or other garbage, with swilings in their troughes, and when they haue eaten it, to driue them to the field, where they may graze and roote for their food: and of grounds the soft marish and moorish grounds are the best, where they may get the roots of Sedge, Reeds, Rushes, Knot-grasse, and such like, which is wholesome for Swine: and at the fall of the Lease it is good to driue them to hedges, where they may get Hawes, Heps, Sloes, Crabs, or such fruit, which is also very wholesome: and the poorer sort will gather these fruites, and keepe them safe to feed their Swine with all the Winter. When Euening commeth, you shall driue your Swine home, and then filling their troughes with Draffe and Swilling, let them fill their bellies, and then stye them vp, so shall you keepe them from doing other hurts or iniuries. If once in a fortnight you mixe with your Swillings some *Radle*, or red *Oaker*, it will preserue them wonderfully from Meazels and all inward infections. And thus much for the generall discourse of Swine: Now I will proceede to their particular infirmities, and other businesses.

CHAP. II.

Of the Peauer, or any hidden sicknesse in Swine.

The cure.

THere is no beast maketh his sicknesse so apparant as the Swine, for when he findeth any grieve or distemperature in his body, he presently droopeth, forsakes his meate, and will not eat till he finde in himselfe a perfect recovery: Therefore when you shall so find him to forsake his meat, you shall first let him blood vnder his taile, and vnder his eares, and if they bleed not freshly enough, you shall beate them with a small sticke, and that will bring forth the blood; then wrap about the wounds the barke of a young *Oser*, and then keepe him warme, and giue him to drinke warme *Swillings*, well mixt with *Barley* meale, and red *Oaker*.

CHAP. III.

Of the Murren, Pestilence, or Catharre in Swine.

The cure.

THese diseases being all of one nature are very much incident to Swine, and spring from many groundes, as from corruption in blood ingendred by the eating of rotten fruit, or too much Butchers garbage, and many times by eating too ranke grasse, wherein is much *Hemlocke*; the particular signes are, moyst eyes, and their heads borne on one side, but the generall knowledge is their fasting and mortality. The cure is, to giue them in warme *Wash*, *Hens-dung*, and boyld *Liverwort*, with a little red *Oaker*.

CHAP. IIII.

Of the Gall in Swine.

The cure.

SWine will oft haue an ouer-flowing of the Gall, because choller is much powerfull in them, which you shall know by a swelling which will rise vnder their lawes: And the cure is, to stampe *Gall-wort*, or *Saffron*, and mixe it with *Hony* and *Water*, and then straining it, giue it the Swine to drinke by a pint at a time.

CHAP.

CHAP. V.

Of the Meazels in Swine.

THis disease of all other is most common in Swine, and with most ease helped; as thus, you shall take the oldest *Prine* that you can get, and mixe it with red *Oaker* till it be thicke, and about the quantitie of an *Al* quart, then mixe it with a gallon of warme sweet *Whey*, and give it the Swine to drinke after he hath beene kept all night fasting.

CHAP. VI.

Of Impostumes in any part of a Swine.

Swine will haue Impostumes in many parts of their bodies, as vnder their throats, their eares, bellies, and oft vpon their sides. The cure is, if they be soft, to lance them, and let out the matter, and then heale them with *Tarre* and *Butter*, but if they be not soft, then let the Swine bloud vnder the tongue, and rubbe all his mouth, chappes, and groyne with *Wheat-meale* and *Salt*, and the Impostume will goe away.

The cure.

CHAP. VII.

Of vomiting in Swine.

IF your Swine doe vomit and cast vp his meate, you shall give him splented *Beaxes* to eate, and they will strengthen his stomacke.

CHAP. VIII.

Of Leannesse, Mislike, Scurfe, and Manginess in Swine.

THese diseases proceed from corruption of bloud, ingendred by lying wet in their sties, hauing filthy, rotten litter, or much scarcitie of meate. The cure is, first to let the Swine bloud vnder the taile, then to take a *Wooll-Card* and to combe off all the scurfe and filth from rhe Swines backe, euen till his skinne bleede: then take *Tarre*, *Boares grease* and *Brimstone*, and mixing them well together, annoynt the Swine therewith; then

The cure.

let the Strye be mended, his Litter be sweet, and giue him good warme foode, and the Swine will be fat and sound very sodainely.

CHAP. IX.

Of the sleeping euill in Swine.

The cure.

SWine are much subiect to this disease in the Sommer-time, & you shall know it by their continuall sleeping, and neglecting to eate their meate. The cure is, to house them vp, and keep them fasting twentie and foure houres; then in the morning when hunger pincheth them, to giue them to drinke water, in which is stamp't good store of *Stonecroepe*; which, as soone as they haue drunke, they will vomite and cast, and that is a present remedy.

CHAP. X.

Of paine in the Milt.

The cure.

SWine are oft troubled with paine in their Milts or Spleenes, which proceedeth from the eating of Mast, when they are first put thereunto, through their ouer greedy eating thereof, and is knowne by a reeling, going of one side. The cure is, to giue them the iuyce of *Wormewood*, in a little *Honyed-water* to drinke, and it will aswage the paine.

CHAP. XI.

Of the vnnaturalnesse of Soves.

MAny Soves are so vnnaturall that they will deuoure their Pigges when they haue farro'd them, which springeth from an vnnaturall greedines in them: which to helpe, you must watch her when she farroweth, and take away the Pigges as they fall, then take the wreckling, or worst Pigge, and annoynt it all ouer with the iuyce of *Stonecrop*, and so giue it to the Sow againe: and if she deuoure it, it will make her cast and vomit so extreame, that the paine of the surfet will make her loathe to doe the like againe: But of all cures, the best
for

for such an vnnaturall beast is to feede her and kill her.

CHAP. XII.

Of the Laxe or Flixie in Hogges.

FOR the Laxe or Flixie in Swine, you shall giue them *Veriuyce* and *Milke* mixt together to drinke, and then feede him with drie foode, as *Spletted Beanes*, *Akornes* or *Akorne-buskes*.

CHAP. XIII.

Of the lugging of Swine with dogges.

IF your Swine be extreemely lugged and bitten with *Dogs*, to preuent the ranckling and impostumation of the soare, you shall annoynt it with *Vinegar*, *Sope*, and *Tallow* mixt together, and it will cure the same.

CHAP. XIII.

Of the Poxe in Swine.

THE Poxe is a filthy and infectious disease in Swine, proceeding from corrupt bloud, ingendred by povertie, wet lying, lowfinesse, and such like; and the Swine can neuer prosper which hath them. The cure is, to giue The cure. him first to drinke two spoonefuls of *Treacle* in a pinte of *Honied-water*, which will expell the infection outwardly, then to annoynt the sores with *Brimstone* and *Boares-grease* mixt together, and so seperate the sicke from the sound.

CHAP. XV.

Of killing Maggots in the eares or other parts of Swine.

IF Maggots shall breede in the eares of your Swine, which haue beene lugged with *Dogges*, for want of good looking vnto, as often it happeneth: you shall take either the sweetest *Worte* you can get, or else *Hony*, and annoynt the sores therewith, and the Maggots presently will fall off and die.

CHAP.

CHAP. XVI.

Of feeding a Swine exceeding fat, either for Bacon, or for Lard.

The feeding
of Swine in
Wood
Countries.

Diuers men according to the nature of diuers Countries, haue diuers wayes in feeding of their Swine, as those which liue neare vnto Woods, and places where store of Mast is, turne their Swine vnto the Mast for fixe or eight weekes, and then hauing got flesh and fatnesse on their backes doe bring them home, and put them vp in Sties, and then feede them for ten daies or a fortnight after with olde drie Pease giuen them oft in the day, a little at once, with water, as much as they will drinke: for this will harden the flesh and fat so that it will not consume when it comes to boyling: this manner of feeding is good, and not to be disliked.

The feeding
of Swine in
Champaine
Countries.

Now, the feeding of swine in champaine Countries, which are farre from Woods, is in this manner: First, you shall stie vp those swine which you intend to feede, and let them not come out of the same till they be fed, but haue their foode and water brought vnto them: now, the first two daies you shall giue them nothing; the third day you shall early in the morning giue them a pretty quantie of drie Pease or Beanes; at noone you shall giue them as much more; at foure a clocke as much more, and when you goe to bed as much more, but all that day no water: the next day you shall feede them againe at the same houres, and set water by them that they may drinke at their owne pleasures; and twice or thrice a weeke, as your prouision will serue you, it is good to fill their bellies with sweet Whay, Butter-Milke, or warme wash, but by no meanes scant the proportion of their Pease: and by thus doing, you shall feede a swine fatte enough for the slaughter in foure or fise weekes.

Of feeding
at the Reeke

There be other Husbandmen in Champaine Countries,

as

as in *Leycestershire*, and such like, that turne their Swine to Pease-reckes, or stacks, set in the Fields, neere vnto water furrowes, or rundles, so that they may let the water into the stacke-yard; and then morning and evening cut a cutting of the stacke or reeke, and spread the reapes amongst the Swine: this manner of feeding is best for small Porkets; and will fat them reasonably in three weekes or a moneth. If you feede Sheepe amongst your Porkets, it is very good, and daily by many practised; for by that meanes you shall not loose any of your Graine, for what your Sheepe cannot gather vp, your Porkets will.

Now, for such as liue in or neare about great Cities, or Townes, as *London*, *York*, or such like, and haue neither great store of Mast, nor great store of Graine; yet they haue a manner of feeding as good, and somewhat more speedier then any of the other, onely the Bacon is not so sweet or toothsome; and thus it is: They flie vp their fatlings, as is before-said, and then take Chandlers Graines, which is the dregs and offall of rendered Tallow, as hard skinnies, kels, and fleshy lumps, which will not melt, together with other course skins of the Tallow, Suet, or Kirchin fee, and mixing it with warme Wash, giue it the Swine to eate three or foure times in the day, and it will suddenly puffe him vp with fatnesse; then bestow of eue-ry Swine a Bushell of dry Pease to harden his flesh, and you may then kill them at your pleasure. The only danger of this food is, it will at first sometimes make Swine scoure; especially young Pigges, if they eate it: but as soone as you perceiue such a fault, giue vnto your elder Swine, Milke and Verduyce, and to your Pigges Verduyce onely.

Now, lastly, the best feeding of a Swine for Larde, or a Boare for Brawne, is to feede them the first weeke with Barley, sodden till it breake, and sod in such quantitie,

T

that

Of feeding
of Swine in
or about
great Cities.

Of feeding
Hogges for
Larde, or
Boares for
Brawne.

that it may euer be giuen sweet: then after to feed them with raw Mault from the floore, before it be dried, till they be fat enough; and then for a weeke after, to giue them drie Pease or Beanes to harden their flesh. Let their drinke be the washing of Hoggeheads, or Ale Bartels, or sweete Whay, and let them haue more thereof. This manner of feeding, breeds the whitest, fattest, and best flesh that may be, as hath beene approued by the best Husbands.

The end of the Swine of all sorts.

Of Conies.

CHAPTER I.

Of the tame rich Conie, his nature, choyce, profit, and preservation.

The nature
of the Cony



ALl sorts of Conies may as well be kept tame as wilde, and doe above other Beasts delight in imprisonment and solitarinesse, which proceedeth from the strength of melancholy in their natures, being creatures so much participating of the earth, that their delight is to liue in Holes, Rockes, and other darke Cauernes. They are violently hot in the act of generation, and perform it with such vigour and excesse, that they swoone and lie in traunces a good space after the deede is done. The males are giuen to much crueltie, & would kill the young Rabbits if hee could come to them: whence it proceedeth, that the Females after they haue kindled, hide their young ones, and close vp their boles, so that the Bucke-Conie may not finde them. The Female, or Doe-Conie, are wonderfull in their intcrease, and bring forth young ones

ones every moneth: therefore, when you keepe them tame in Boxes, you must obserue to watch them, and as soone as they haue kindled, to put them to the Bucke, or otherwise they will mourne, and hardly bring vp their young ones.

The Boxes, in which you shall keepe your tame Conies, would be made of thinne Wainescot boards, some two foot square, and one foot high: and that square must be diuided into two roomes, a greater room with open windowes of wyar, through which the Conie may feede, and a lesser room without light, in which the Conie may lodge, and kindle, and before them both a Trough, in which you may put meate, and other necessaries for the Conie: and thus you may make Boxe vpon Boxe in diuers stories, keeping your Buckes by themselves, and your Does by themselves, except it be such Does as haue not bred, and then you may let a Bucke lodge with them: also when your Doe hath kindled one nest and then kindleth another, you shall take the first from her, and put them together in a fenerall Boxe, amongst Rabbits of their owne age, provided that the Boxe be not pestred, but that they may haue ease and libertie.

Now, for the choise of these tame rich Conies, you shall not, as in other Cattell, looke to their shape, but to their richnesse, onely elect your Buckes the largest, and goodliest Conies you can get: and for the richnesse of the skin, that is accounted the richest, which hath the equallest mixture of black and white haire together, yet the blacke rather shadowing the white, then the white any thing at all ouermasking the black, for a black skinne with a few siluer haire is much richer then a white skin with a few blacke haire: but as I said before, to haue them equally or indifferently mixt is the best above all other: the Furre

Of Boxes
for tame
Conies.

Of the
choyse of
rich Conies.

would be thicke, deepe, smooth, and shining, and a blacke coate without siluer haire though it be not reckoned a rich coate, yet it is to be preferred before a white, a pyed, a yellow, a dunne, or a gray.

Of the pro-
fit of rich
Conies.

Now for the profit of these rich Conies, (for unless they did fare away, & by many degrees exceede the profit of all other Conies, they were not worthy the charge which must be bestowed vpon them) it is this: First, euery one of these rich Conies which are killed in season, as from *Marilmas* vntill *Candlemas*, is worth any such other Conies, for they are of body much fatter and larger, and when another skin is worth two pence or three pence at the most, they are worth two shillings, or two shillings sixe pence: againe, they increase oftner, and bring forth more Rabbits at one kindling then any wilde Cony doth: they are ever ready at hand for the skin, Winter and Summer, without charge of Nets, Ferrets, or other engines, and give their bodies gratis, for their skins will neuer pay their masters charge with a most large interest.

Of the feed-
ing & pre-
seruation of
Conies.

Now for the feeding and preservation of these rich Conies, it is nothing so costly or troublesome as many haue imagined, and as some (ignorant in the skill of keeping them) haue made the world thinke: for the best food you can feede a Cony with, is the sweetest, shortest, softest, and best Hay you can get, of which one load will serue two hundred couples a yeere, and out of the stocke of two hundred, you may spend in your house two hundred, and sell in the Market two hundred, yet maintaine the stocke good, and answere euery ordinary casualtie. This Hay in little clouen sickes would be so placed before the Boxes that the Conies might with ease reach it, and pull it out of the same, yet so as they may not scatter nor waste any. In the troughes vnder
their

their Boxes, you shall put sweet *Oates*, and their water, & this should be the ordinary & constant food wherewith you should feed your Conies, for all other should be vfed but Physically, as for the preseruatiō of their healths; as thus, you shall twice or thrise in a fortnight, for the cooling of their bodies, giue them *greenes*, as *Mallows*, *Clauer-grasse*, *Sower-dockes*, blades of greene *Corne*, *Cabbage* or *Colewort* leaues, and such like, all which cooleth and nouriseth exceedingly: some vse to giue them sometimes sweet *Graines*, but that must be vfed very seldome, for nothing sooner rotteth a Cony: you must also haue great care, that when you cut any grasse for them, or other weeds, that there grow no yong *Hemlocke* amongst it, for though they will eat it with all greedinesse; yet it is a present poyson, and kils sodainely: you must also haue an especiall care every day to make their Boxes sweet & cleane, for the strong sauour of their ordure and pisse is so violent, that it will both annoy themselves, and those which shall be frequent amongst them.

Now for the infirmities which are incident vnto them, they are but two: the first is rottennesse, which commeth by giuing them too much greene meate, or gathering their *Greenes* and giuing it them with the dew on; therefore let them haue it but seldome, and then the drinesse of the *Hay* will euer drinke vp the moysture, knit them, and keepe them sound without danger.

The next is a certaine rage or madnesse, ingendred by corrupt bloud springing from the ranknes of their keeping; and you shall know it by their wallowing and tumbling with their heels vward, & leaping in their Boxes. The cure is to giue them *Harebisse* to eat, & it will heale them. And thus much of the tame rich Cony & his properties.

The end of the foure-footed Beasts.

Of the rot
in Conies.

Of madnes
in Conies.



The second Booke.

Of Poultry.

CHAPTER I.

Contayning the ordering, fatting, cramming, and curing of all infirmities of Poultry, as Cockes, Hens, Chickens, Capons, Geese, Turkeys, Pheasants, Partridges, Quails, House-doves, and all sorts of Fowle whatsoever. And first of the Dung-hill-Cocke, Henne, Chicken and Capon.



One small thing hath beene written of this nature before, but so drawne from the opinions of old Writers, as Italians, French, Dutch, and such like, that it hath no coherence or congruity with the practise and experience of English customes, both their rules and climbes being so different from ours, that except we were to live in their Countries, the rules which are Printed are vlesse, and to no purpose. To let passe then the opinion of Strangers, and come to our owne home-bred knowledge, which is so mixed with all profitable experiments, that it needeth not the modles of other Nations so much as men would make vs beleue. You shall understand that the dung-hill-Cocke (for the fighting Cocke deserueth a much larger and particular discourse) is a Fowle of all other birds the most manliest, stately, and maiestically, very tame and familiar with the Man, and naturally inclined to live and prosper in habitable houses: he is hot and strong in the Act of generation, and will serue ten Hens sufficiently, & some, twelue and

Of the
dung-hill
Cocke.

and thirteene: He delighteth in open and liberal plaines, where he may lead forth his Hens into greene pastures, and vnder hedges; where they may worne and bathe themselves in the Sunne, for to be pent vp in walled places, or in paved Courtes is most vnnaturall vnto them; neither will they prosper therein.

Now of the choise and shape of the dung-hill-Cocke, he would be of a large and well lised body, long from the head to the rumpe, and thicke in the garth; his necke would bee long, loose and curiously bending it, and his body together being straight, and high vp erected, as the Falcon and other birds of pray are, his combe, wattles, and throat would be large, great compasse, iagged, and very Scarlet red, his eyes round and great, the colour answering the colour of his plume or male, as gray with gray, red with red, or yellow with yellow, his bill would be crooked, sharp, and strongly set on to his head, the colour being sutable with the colour of the feathers on his head, his maine or necke feathers would bee very long, bright, and shining, couering from his head to his shoulders; his legs straight, and of a strong beame, with large long spurres, sharpe, and a little bending, and the colour blacke, yellow, or blewish, his clawes short, strong, and well wrinkled; his tayle long, and couering his body very closely: and for the generall colour of the dung-hill Cocke, it would be red, for that is medicinall, and oft vsed in Cullisses and restoratives. This Cocke should be valiant within his owne walke, and if he be a little knauish, he is so much the better; he would be oft crowing, and busie in scratching the earth to finde out wormes and other food for his Hennes.

Of the
choise and
shape of the
Cocke.

Now for the Henne, if she be a good one, she should not differ much from the nature of the Cocke, but be va-

Of the Hen
her choise
and shape.

liant,

liant, vigilant, and laborious both for her selfe and her Chickens. In shape the biggest and largest are the best, every proportion answering these before described of the Cock, onely in stead of her Comb she should haue vpon her crowne a high thicke tuft of feathers: to haue many & strong clawes is good, but to want hinder clawes is better, for they oft breake the Eggs, & such Hens sometimes proue vnnatural: it is not good to chuse a crowing Hen, for they are neither good breeders nor good layers. If you chuse Hens to sit, chuse the elder, for they be constant, and will sit out their times; and if you will chuse Hens to lay, chuse the yongest, for they are lusty and prone to the act of ingendring, but for neither purpose chuse a fat Hen, for if you set her, she wil forsake her nest, and if you keepe her to lay, she will lay her Eggs without shels. Besides, a fat Hen will waxe sloathfull, and neither delight in the one nor in the other Art of nature, such Hens then are euer fitter for the dish then the hen-house.

Of setting
Hennes.

The best time to set Hens to haue the best, largest, and most kindly Chickens, is in February, in the increase of the Moone, so that she may hatch or disclose her Chickens in the increase of the next new Moone, being in March, for one brood of March Chickens is worth three broods of any other: you may set Hens from March till October, and haue good Chickens, but not after by any meanes, for the Winter is a great enemy to their breeding. A Henne doth sit twenty one dayes iust, and then hatcheth, but Peahens, Turkies, Geese, Ducks, and other water-fowle sit thirty: so that if you set your Hen, as you may doe vpon any of their egges, you must set her vpon them nine dayes before you set her vpon her owne. A Hen will couer ninetine egges well, and that is the most, in true rule, she should couer, but vpon what number

focuer

soeuer you set her, let it be odde, for so the egges will lie round, close, and in euen proportion together: It is good when you lay your Egges first vnder your Hennes, to marke the vpper side of them, and then to watch the Hen, to see if she busie her selfe to turne them from the one side to the other, which if you finde shee doth not, then when she riseth from her egges, to feed or bathe her selfe, you must supply that office, and turne euery Egge your selfe, and esteeme your Henne of so much the lesse reckoning for the vse of breeding: be sure that the egges which you lay vnder her, be new and sound, which you may know by their heavinesse, fulnesse, and cleerenesse, if you hold them vp betwixt the Sun and your eie-sight; you must by no meanes, at any time raise your Hen from her nest, for that will make her vtterly forsake it.

Choyse of
Egges.

Now, for helping a Henne to hatch her Egges, or doing that which should be her office, it is vnnessearie, and shall be much better to be forborne then any way vsed; or to make doubt of bringing forth, or to thinke the Henne sitteth too long (as many foolish curious housewiues doe) if you be sure you set her vpon sound Egges, is as frivolous, but if you set her vpon vnfound Egges, then blame your selfe, both of the losse and injury done to the Henne in her losse of labour. A Henne will be a good sitter from the second yeare of her laying to the fift, but hardly any longer: you shall obserue ether when your Hen riseth from her nest, to haue meate and water ready for her, lest straying too farte to seeke her foode, she let her Egges coole too much, which is very hurtfull. In her absence you shall stirre vp the straw of her nest, and make it soft and handsome, and lay the Egges in order, as she left them: doe not in the election of your Egges, chuse those which are monstrous

great, for they many times haue two yolkes, and though some write, that such Eggs will bring out two Chickens, yet they are deceiued, for if they bring forth two, they are commonly most abortiue and monstrous. To perfume the nest with Brimstone is good, but with Rosemary is much better. To set Hens in the Winter time in stowes or ouens is of no vse with vs in England, and though they may by no meanes bring forth, yet will the Chickens be neuer good nor profitable, but like the planting of Lemon and Pomegranate trees, the fruit will come a great deale short of the charges. When your Hen at any time is absent from her nest, you must haue great care to see that the Cocke come not to sit vpon the Egges, (as he will offer to doe) for he will endanger or breake them, and make her lose her nest worke.

Of Chickens,

As soone as your Chickens be hatcht, if any be weaker then other, you shall lap them in Wooll, and let them haue the ayre of the fire, and it will strengthen them, to perfume them with a little Rosemary is very wholesome also; and thus you may in a five keepe the first hatcht Chickins till the rest be disclose (for Chickins would haue no meate for two dayes) and some shall be- ing harder then other, they will take so much distance of time in opening: yet vnlesse the Chickens be weak, or the Hen rude, it is not amisse to let them alone vnder her, for she will nourish them most kindly: after two dayes is past, the first meate you giue them should be very small Oatemeale, some drie, and some steeped in Milke, or else fine wheat-bread crummes, and after they haue got strength, then Curds, Cheese-parings, white bread crusts soak'd in Milke or drinke; Barley-meale or wheate-bread scalded, or any such like soft meat that is small, and will easily be diuided. It is good to keepe Chickes

Chickes one fortnight in the house, and after to suffer them to goe abroad with the Henne to worne, for that is very wholesome: to chop greene Chyues amongst your Chickens meate will preserue them from the Rye, and other diseases in the head; neither must you at any time let your Chickins want water, for if they be forc'd to drinke in puddles, it will breed the Pippe: also, to feed vpon Tares, Darnell, or Cockell, is dangerous for young Chickens.

You may by these foodes before said, feed Chickens ry fat vnder their Dams: but if you will haue fat cram'd Chickens, you shall coope them vp when the Dam forsakerh them, and the best crams for them is wheat-meale and milke, made into dough, and then the crammes steeped in Milke, and so thrust downe their throates; but in any case, let the crams be small, and well wet for choaking. Foureteene dayes will feede a Chicken sufficiently: and thus much briefly for your breed.

Of feeding
and cram-
ming Chic-
kens.

Now, because Egges of themselues are a singular profit; you shall vnderstand, that the best way to preserue or keepe them long, is, as some thinke, to lay them in Straw, and couer them close, but that is too cold; and besides will make them musty: others will lay them in Bran, but that is too hot, and will make them putrisie: and others will lay them in Salt, but that makes them waste and diminish: the best way then to keepe them most sweet, most sound, and most full, is onely to keepe them in a heape of old Malt, close, and well couered all ouer.

Of prefer-
uing Egges.

You shall gather your Egges vp once a day, and leaue in the nest but the nest-Egge, and no more; and that would euer be in the after-noone when you haue seene euery Henne come from her nest seuerally: some Hens will by their cackling tell you when they haue laide, but

Of gathe-
ring Egges.

some will lay mute, therefore you must let your owne eye be your instructor.

Of the Capon, when to carue him.

Now, touching the Capon, which is the guelt Cocke-chicken, you shall vnderstand, that the best time to carue or gueld him, is as soone as the Dam hath left them, (if the stones be come downe) (or else as soon as they begin to crow: for the art of caruing it selfe, it is both common and easie, and much sooner to be learned by seeing one carued, then by any demonstration in writing.

A Capon to leade Chickens.

These Capons are of two vses: the one is, to lead chickens, ducklings, yong Turkeys, Peahens, Pheasants & Partridges, which he will doe altogether, both naturally and kindly, and through largenesse of his body will brood or couer easily thirty or thirty and five; he will lead them forth safely, and defend them against Kites or Buzzards, more better then the Hens: therefore the way to make him to take, is, with a fine small Brier, or else sharpe Nettles at night, to beate and sting all his breast and nether parts, and then in the darke to seate the Chickens vnder him, whose warmth taketh away his smart, hee will fall much in loue with them, and whensoever hee proueth vnkinde, you must sting, or beate him againe, and this will make him he will neuer forsake them.

Of feeding or Cramming Capons.

The other vse of Capons is, to feed for the Dish, as either at the Barne dores, with craps of Corne and the chauings of Pulse, or else in Pens in the house, by cramming them, which is the most dainty. The best way then to cram a Capon (setting all strange inuentions apart) is to take Barley-meale, reasonably sifted, and mixing it with new Milke, make it into a good stiffe dough; then make it into long crams, biggett in the midd, and small at both endes, and then wetting them in lukewarme Milke, giue the Capon a full gorgefull thereof three times

times a day, Morning, Noone, and night, and he will in three weekes be as fat as any man neede to eate. As for mixing their crans with sweet Worre, Hogs greafe, or Saller Oyle., they are by experience found to breede loathe in the Birds, and not to feede at all, onely keepe this obseruation; not to giue your Capon new meat till the first be put ouer; and if you finde your Capon hard of digestion, then you shall sift your meale finer, for the finer your meale is, the sooner it will passe through their bodies. And thus much for the Capon. Now for their infirmities, they follow in order.

CHAP. II.

Of the Pippe in Poultrie.

THe Pippe is a white thin scale, growing on the tippe of the tongue, and will make Poultrie they cannot feede: it is easie to be discerned, and proceedeth from drinking puddle water, from want of water, or from eating filthy meate. The cure is, to pull off the scale with your naile, and then rub the tongue with salt. The cure.

CHAP. III.

Of the roupp in Poultrie.

THe roupp is a filthy bile or swelling on the rumpe of Poultrie; and will corrupt the whole body. It is knowne by the staring and turning backwards of the feathers. The cure is, to pull away the feathers, and opening the sore to thrust out the Core, and then wash the place with Salt and water, or with brine, and it helpeth. The cure.

CHAP. IIII.

Of the Fluxe in Poultrie.

THe fluxe in Poultrie commeth with eating too much moyst meate. The cure is, to giue them Pease-branne scalded, and it will stay them. The cure.

CHAP. V.

Of stopping in the belly.

STopping in the bellies of Poultrie, is contrary to the fluxe, so that they cannot mure: therefore, you shall annoint their vents, and then giue them either small bits of bread, or Corne steeped in mans vrine.

CHAP. VI.

Of Lice in Poultrie.

IF your Poultrie be much troubled with lice, as it is a common infirmitie, proceeding from corrupt food, or want of bathing in sand, ashes, or such like; you shall take Pepper small beaten, & mixing it with warme water, wash your Poultrie therein, and it will kill all sorts of vermine.

CHAP. VII.

Of stinging with venomous wormes.

IF your Poultrie be stung with any venomous thing, as you may perceiue by their lowring and swelling, you shall then annoynt them with Rewe and Butter mixt together, and it helpeth.

CHAP. VIII.

Of sore eyes in Poultrie.

IF your Poultrie haue sore eyes, you shall take a leafe or two of ground-Iuie, and chawing it in your mouth, suck out the iuyce, and spit it into the sore eye, and it will most assuredly heale it.

CHAP. IX.

Of Hennes which Crow.

IF your Hennes crow, which is an ill signe and vnnatural; you shall pull their wings, and giue her to eate either Barley scorced, or small wheate, and keepe her close from other Poultrie.

CHAP. X.

Of Hennes that eate their Egges.

IF your henne will eate her Egges, you shall onely lay for her nest-Egge a piece of Chalke cut like an Egge, at which

which oft pecking and loosing her labour, she will refrain the euill.

CHAP. XI.

Of keeping a Henne from sitting.

IF you would not haue your henne sit, you shall bathe her oft in cold water, and thrust a small leather through her nostrils.

CHAP. XII.

Of making Hennes lay soone and oft.

IF you feede your hennes often with roasts taken out of Ale, with Barley boilde, or distilled fitches, they will lay soone, oft, and all the winter.

CHAP. XIII.

Of making Hennes leane.

BEcaust fat hennes commonly either lay their Egges without shels, or at the best hand lay very small Egges: to keepe them leane, and in good plight for laying, you shall mixe both their meate and water with the poulder of Tylebeards, Chalk, or else Tares, twice or thrice a weeke.

CHAP. XIII.

Of the Crow-trodden.

IF your Henne be trodden with a carryon Crow, or a Rooke, as oft they are, it is mortall and incurable, and you shall know it by the staring up of her feathers, and hanging of her wings, there is no way with her then but presently to kill her.

CHAP. XV.

Of the Henne-house, and the situation.

NOW for as much as no Poultry can be kept either in health or safetie abroad, but must of force be housed, you shall vnderstand that your Henne-house would be large and spacious, with somewhat a high roote, the wals strong, both to keepe out heeces and vermine, the windows.

windows vpon the Sunne rising, strongly lathed, and close shuts inward, round about the inside of the wals vpon the ground would be built large pens of three foot high, for Geese, Duckes, and great fowle to sit in. Neare to the eavings of the house would be long Pearches, reaching from one side of the house to the other, on which should sit your Cockes, Hennes, Capons and Turckies, each on seuerall Pearches, as they are disposed: at another side of the house in that part which is darkest, ouer the ground pens, would be fixed hampers full of straw for nests, in which your Hens shall lay their Egges; but when they sit to bring forth Chickens, then let them sit on the ground, for otherwise is dangerous: let there be pins stricken into the wals, so that your Poultrye may climbe to their Pearches with ease: let the flore by no meanes be paved, but of earth, smooth and easie: let the smaller fowle haue a hole at one end of the house made to come in and out at; when they please, or else they will seeke roust in other places, and for the greater fowle the doore may be opened Euening and Morning; this house would be placed either neare some Kitchin, Brewhouse, or else some Kilne, where it may haue ayre of the fire, and be perfumed with smoake, which to Pullen is delightfull and wholesome. And thus much of the Cocke, Henne, Capon, and Chicken.

CHAP. XVI.

Of Geese, their nature, choise, and how to breed them.

Geese, are a fowle of great profit many waies, as first for foode, next for their feathers, and lastly for their grease. They are held of Husband-men to be fowle of two liues, because they liue both on land and water: and therefore all men must vnderstand, that except he haue either Pond or Streame, he can neuer keepe Geese well.

They

They are so watchfull and carefull of themselves that they will prevent most dangers in Grasses, for they must necessarily haue, and the worst, and that which is the most vsclesse is the best, as that which is moorish, rotten, and vasaunoury for cattell. To good grasse they are a great enemy, for their dung and treading will putrefie it, and make it worse then barraine.

Now for the choise of Geese, the largest is the best, and the colour would be white or gray, all of one paire, for pyde are not so profitable, and blake are worse. Your Gander would be knauish and hardy, for he will defend his Goslings the better.

Now for the laying of egges, a Goose beginneth to lay in the Spring, and she that layeth earliest is ener the best Goose, for she may haue a second hatch. Geese will lay twelue, and some sixteene egges; some will lay more, but it is seldome, and they cannot be all well couered: you shall know when your Goose will lay, by her carrying of straw vp and downe in her mouth, and scattering it abroad; and you shall know when she will sit by her continuing on the nest still after she hath laid. You must set a Goose vpon her owne egges, for shee will hardly or unkindly sit on another Gooses egges: you shall win her straw when you set her, mixe with roots, for this is good for the Goslings: thirtie dayes is the full time that a Goose sitteth, but if the weather be faire and warme, she will hatch three or foure daies sooner: euen when the Goose riseth from the Nest, you shall giue her meate, as flegge Oates, and Branne scalded, and giue her leaue to bathe in the water. After she hath hatched her Goslings, you shall keepe them in the house tenne daies, and feede them with curds, scalded chippings, or Barley-meale in Milke knoden and broken, also ground

The choise
of Geese.

Of laying
egges and
sitting.

Ordering of
Goslings.

Malt is excellent good, or any Branne that is scalded in Water, Milke, or tappings of drinke. After they haue got a little strength, you may let them goe abroad with a keeper five or sixe houres in a day, and let the dam at her pleasure intice them into the water; then bring them in, and put them vp, and thus order them till they be able to defend themselues from vermine. After a Gosling is a moneth or sixe weekes old, you may put it vp to feede for a greene Goose, and it will be perfectly fed in another moneth following: and to feede them there is no meate better then slegge Oates, boyl'd and giuen plenty thereof thrise a day, Morning, Noone, and Night, with good store of Milke, or Milke and Water to drinke.

Of greene
Geese and
their fatting

Of Ganders

Now shall vnderstand one Gander will serue well five Geese, and to haue not above forty Geese in a flocke is best, for to haue more is both hurtfull and troublesome.

Fatting of
elder Geese.

Now for the fatting of elder Geese which are those which are five or sixe moneths old, you shall vnderstand that after they haue in the stubble fields, and during the time of harvest got into good flesh, you shall then chuse out such Geese as you will feede, and put them in severall pens which are close & darke, and there feede them thrise a day with good store of Oates, or Spotted Beanes, and giue them to drinke Water and Barley-meale mixt together, which must euermore stand before them, this will in three weekes feede a Goose so fat as is needfull.

Of gathe-
ring Geese
feathers.

Now lastly, for the gathering of a Gooses feathers, you shall vnderstand, that howsoeuer some Writer aduise you for a needles profit to pull your Goose twice a yeere, *March* and *August*: yet certainly it is very nought and ill: for first, by disabling the sight of the Goose, you make her subiect to the cruelty of the Foxes, and other ravenous beasts, and by vneloathing her in Winter, you
strike

strike that cold into her which kills her so daingly, therefore it is best to stay till moulting time, or till you kill her, and then you may imploy all her feathers at your pleasure, either for Beds, Fletchers, or Scriueners.

For infirmities in Geese, the most and worst they are subiect vnto, is the Gargill; which is a mortall stopping of the head. And the cure is, to take three or foure cloues of *Garlick*, and beating them in a mortar with sweet *Butter*, make little long bals thereof, and giue two or three of them to the Goose, fasting, and then shut her vp for two houres after.

Of the Gargill in Geese

The cure,

CHAP. XVII.

Of Turkies, their nature, vse, increase and breeding.

Turkies, howsoeuer by some writers they are held deuourers of Corne, strayers abroad, euer puling for meate, and many such like fained troubles, as if they were viterly vnprofitable; yet it is certaine they are most delicate, either in Paste, or from the Spit, and being fat, farre exceeding any other house-fowle whatsoeuer: nay they are kept with more ease and lesse cost: for they will take more paines for their foode then any other Bird, onely they are enemies to a Garden, and from thence must euer be barred. They are when they are young very tender to bring vp, both because they haue a straying nature in themselves, and the dammes are so negligent that whilest she hath one following her, she neuer respecteth the rest; therefore they must haue a vigilant keeper to attend them till they can shift for themselves, and then they will focke together and seldome be parted. Till you fat them you neede not take care for food for them; they loue to roost in trees or other high places.

Now for your choyce of such as you would breede on; your Turkie-Cocke would not be about two yeere

The choyse of the Turkie-Cocke.

old at most, be sure that he be louing to the Chickens, and for your Hen she will lay till she be five yeeres old and vpward. Your Turkie-Cocke would be a Bird large, stout, proud, and maiesticall, for when he walketh delected, he is neuer good treader.

Of the Tur-
kie-Henne,
her sitting.

The Turkey-Henne if she be not prevented will lay abroad in secret places, therefore you must watch her, and bring her into your Henne-house, and there compell her to lay. They beginne to lay in March, and will sit in April, and eleuen egges or thirteene is the most they should couer: they hatch euer betweene fite and twenty, and thirty daies. When you haue hatcht their broods be sure to keepe the Chicks warme, for the least cold kills them, and feede them either with Curds, or greene fresh-Cheese cut into small peeces. Let their drinke be Milke, or Milke and Water: you must be carefull to feede them oft; for the Turkey-henne will not like the House-henne call her Chickens to feede them. When your Chicks haue got strength, you shall feede them abroad in some close walled grasse-plat, wherethey cannot stray, or else euer be at charge of a Keeper. The dew is most hurtfull vnto them, therefore you must house them at night, and let them abroad after Sunne rise in the Morning.

Of feeding
Turkies.

Now for the fating of Turkies, sodden Barly is excellent, or sodden Oates for the first fortnight, and then for another fortnight cramme them in all sorts as you cramme your Capon, and they will be fat beyond measure. Now for their infirmitie: when they are at libertie, they are such good Physitions for themselves, that they will neuer trouble their owners, but being coopt vp, you must cure them as is before described for Pullen. Their egges are exceeding wholesome to eate, and restore nature decayed wonderfully.

CHAP. XVIII.

Of the Ducke, and such like water-fowles.

The same Ducke is an exceeding necessary fowle for the Husbandmans yard, for she asketh no charge in keeping, but liueth of corne lost, or other things of lesse profit. She is once in a yeare a very great layer of Eggs, and when she sitteth she craues both attendance & feeding: for being restrayned from seeking her food, shee must be helped with a little Barley, or other ouer-chaining of corne, such as else you would giue vnto Swine. as for her sitting, hatching and feeding of her Ducklings it is in all points to be obserued in such manner as you did before with the Goose, onely after they are abroad they will shift better for their food then Goslings will. For the fattening of Ducks or Ducklings, you may do it in three weekes, by giuing them any kinde of Pulse or Graine, and good store of water.

If you will preferue wilde-Ducks, you must wall in a little peece of ground, in which is some little Pond or Spring, & couer the top of it all ouer with a strong Net: the Pond must be set with many trusts of Oziers, & haue many secret holes and creekes in, for that will make them delight and feed though imprisoned. The wilde-Ducke when she layeth, will steale from the Drake, and hide her Nest, for he else will suck the Eggs. When she hath hatcht she is most carefull to nourish them, and needeth no attendance more then meate, which would be giuen fresh twice a day, as scalded Bran, Oats or Fitches. The house Hen will hatch wilde Ducks Egges, and the meat will be much the better, yet euery time they goe into the water, they are in danger of the Kite, because the Hen cannot guard them. In the same manner as you nourish wilde-Ducks, so you may nourish Tejles, Widgeons, Sheldrakes or greene Plovers.

Of Wilde-Ducks, and their ordering.

CHAP. XIX.

Of Swannes, and their feeding.

TO speake of the breeding of Swannes is needlesse, because they can better order themselves in that businesse then any man can direct them; onely where they build their Nests, you shall suffer them to remaine undisturbed, and it will be sufficient: but for the feeding of them fat for the dish, you shall feede your Cygnets in all sorts as you feed your Geese, and they will be thorow fat in seauen or eight weekes, either coop't vp in the house, or else walking abroad in some priuate Court; but if you would haue them fat in shorter space, then you shall feed them in some Pond, hedg'd or payl'd in for the purpose, hauing a little dry ground left where they may sit and prune themselves, and you may place two troughes, one full of Barley and Water, the other full of old dride Malt, on which they may feed at their pleasure, and thus doing, they will be fat in lesse then foure weekes: for by this meanes a Swanne keepeth himselfe neate and cleane, who being a much defiled bird, liueth in drie places so vncleane, that they cannot prosper, vnlesse his attender be diligent to dresse and trim his walke every houre.

CHAP. XX.

Of the Peacockes, and Peabens, their increase and ordering.

PEacockes, howsoeuer our old writers are pleased to deceiue themselves in their praises, are birds more to delight the eye by looking on them, then for any particular profit; the best commodity rising from them, being the clensing and keeping of the yard free from venemous things, as Toades, Newtes, and such like, which is their daily food: whence it comes, that their flesh is very vnwholesome, and vsed in great banquets more for the rarenesse then the nourishment; for it is most certaine, roste a Peacocke or Peahen neuer so dry, then set it vp,
and

and looke on it the next day, and it will bloud-rawe, as if it had not been roasted at all.

The Peahen loues to lay her Egges abroad in bushes and hedges, where the Cocke may not find them, for if he do, he will breake them; therefore as soone as she begins to lay, seporate her from the Cocke, and house her till she haue brought forth her young, and that the corner of feathers begin to rise at their foreheads, and then turne them abroad, and the Cocke will loue them, but not before. A Peahen sits in thirty dayes, & in her sitting any graine, with water, is food good enough before your Chickens go abroad, you shall feed them with fresh Greene Cheese, and Barly-Meale, with water; but after they go abroad, the Dam will provide for them. The best time to set a Peahenne is at the beginning of the Moone, and if you set Hen-Eggs amongst her Eggs, shee will nourish both equally. These Peachickens are very tender, and the least cold doth kill them; therefore you must haue care to keep them warme, and not to let them goe abroad but when the Sun-shineth. Now, for the feeding of them, it is a labour you may well saue, for if they goe in a place where there is any corne stirring, they will haue part, and being meate which is seldome or neuer eaten, it mattereth not so much for their fattening.

CHAP. XXI

Of the same Pigeon, or rough footed.

THe same rough-footed Pidgeon differs not much from the wilde Pidgeon, onely they are somewhat bigger, and more familiar, and apt to be tame; they commonly bring not forth about one paire of Pidgeons at a time, & those which are the least of body are cuer the best breeders. They must haue their roomes and boxes made cleane once a weeke, for they delight much in neatnesse, and

And if the wall be outwardly whitened or painted, they loue it the better, for they delight much in faire buildings. They will bring forth their young ones once a moneth, if they be well fed, and after they be well pair'd they will neuer be diuided. The Cocke is a very louing and naturall Birde, both to his Hen and the young ones, and will sit the Egges whilest the Hen feedeth, as the Henne sits whilest he feedeth: he will also feed the young with as much painefulnesse as the Dam doth, and is best pleased when he is brooding them. These kind of Pidgeons you shall feed with white Pease, and good store of cleane water. In the roome where they lodge you shall euer haue a salt-Cat for them to peeke on, and that which is gathered from Salpeter is the best: also they would haue good store of dry Sand, Grauell & Pybble, to bathe and cleanse themselves withall, and aboue all things great care taken, that no vermine, or other Birds come not into their boxes, especially Scerlings, and such like, which are great Eg-suckers. And thus much of the tame Pidgeon.

CHAP. XXII.

Of nourishing and fattening Hearnnes, Puccets, Gulls, and Bitters.

Hearnnes are nourished for two causes; either for Princes sports, to make traines for the entring their Hawkes, or else to furnish out the Table at great feasts: the manner of bringing them vp with least charge, is to take them out of their nests before they can flie, and put them into a large high Barne, where there is many high and crosse beames for them to perch on: then to haue on the floore diuers square boords with rings in them, and betweene every boord which would be two yards square, to place round shallow tubs full of water, then to the boords you shall tye great gobbets of dogs flesh, cut from the bones, according to the number which you feede;

feede: and be sure to keepe the house sweet, and shift the water oft, onely the house must be made so that it may raine in now and then, in which the Hearne will take much delight. But if you feede her for the dish, then you shall feede them with Livers, and the intrailles of Beasts, and such like, cut in great gobbets; and this manner of feeding will also feede either Gall, Puet, or Bitter: but the Bitter is ever best to be fed by the hand, because when you haue fed him you may tye his beake together, or he will cast vp his meat againe.

CHAP. XXIII.

Of feeding the Partridge, Pheasant, and Quaile.

THese three are the most daintiest of all other birds, and for the Pheasant or Partridge you may feed them both in one roome, where you may haue little boxes where they may runne and hide themselves in diuers corners of the roome; then in the midst you shall haue three wheate sheaues, two with their eares vpward, and one with the eares downeward, & nere vnto them shallow Tubs with water, that the Fowle may pecke the wheate out of the eares, and drinke at their pleasures, and by this manner of feeding you shall haue them as fat as is possible: as for your Quailes, the best feeding them is in long flat shallow boxes, each boxe able to hold two or three dozen, the formost side being set with round pins so thicke that the Quaile may doe no more but put out her head, then before that open side, shall stand one trough full of small chilter-wheat, and another with water, and thus in one fortnight or three weekes you shall haue them exceeding fat.

CHAP. XXIIII.

Of Godwits, Knots, gray-Plover, or Curlewes.

FOR to feede any of these Fowles, which are esteemed of all other the daintiest and dearest, fine Chilter-wheat

wheat and water giuen them thrice a day, Morning, Noone, and Night, will doe it very effectually, but if you intend to haue them extraordinary and crammed fowle, then you shall take the finest drest wheate-meale, and mixing it with Milke, make it into paste, and euer as you knead it, sprinkle into it the graines of small Chilter-wheat till the paste be fully mixt therewith; then make little small crams thereof, and dipping them in water, giue to euery fowle according to his bignesse, and that his gorge be well filled: doe thus as oft as you shall finde their gorges emptie, and in one fortnight they will be fed beyond measure. And with these crammes you may feede any fowle, of what kinde or nature soeuer.

CHAP. XXV.

Of feeding Blacke-birds, Thrushes, Felfares, or any small Birds what soeuer.

TO feede these Birds, being taken old and wilde, it is good to haue some of their kindes tame to mixe among them, and then putting them into great Cages of three or foure yards square; to haue diuers troughs placed therein, some filled with Heps and Hawes, some with Hempe-seed, some with Rape-seed, some with Linseed, and some with water, that the tame teaching the wilde to eate, and the wilde finding such change and alteration of food they will in twelue or fourteene daies grow exceeding fat and fit for the use of the Kitchen.

The end of the Poultry.

CHAP. XXVI.

OF **OF** *to feede any of these Fowles, which are esteemed*

Of Hawkes.

CHAPTER. I.

Of the generall Cares for all diseases & infirmities in Hawkes, whether they be short-winged Hawkes, or long-winged Hawkes; and first, of Castings.

Hawkes, are deuided into two kindes, that is to say, short-winged Hawkes, as the Goshawke and her Tercell, the Sparrow-Hawke, Musker, and such like, whose wings are shorter then their traines, and doe belong to the Ostringer; and long-Winged Hawkes, as the Faulcon-gentle, and her tercell; the Gerfaulcon and Larkin, the Lanner, Merlin, Hobby, and diuers others, which belong vnto Faulconers. Now, for as much as their infirmities, for the most part, proceede from the indiscretion of their gouernours, if they flye them out of season, before they be infeamed and haue the fat, glut, and filthinesse of their bodies scoured and cleansed out, I thinke it not amisse first to speake of Hawkes castings, which are the naturallest and gentlest purges or scourings a Hawke can take, and doth the least offend the vitall parts. Therefore you shall know, that all Ostringers doe esteeme plumage, and the soft feathers of small Birds, with some part of the skinne, to be the best casting a short-winged Hawke can take; and for the purging of her head, to make her tyer much vpon sheepes rumpes, the fat cut away, and the bones well couered with Parcely. But for long-winged Hawkes, the best casting is fine Flannell, cut into square peeces of an inch and a halfe square, and all to ragged, and so giuen with a little bit of meate. By these castings you shall know the soundnesse & vnsoundnesse of your Hawke: for when she

Of Scourings.

hath cast, you shall take vp the casting, which will bee like a hard round peller, somewhat long, and presse it betweene your fingers, and if you finde nothing but cleere water come from it, then it is a signe your Hawke is sound and lustie, if there come from it a yellowish or filthy matter, or if it stincke, it is a signe of rottennesse and disease; but if it be greazy or slimy on the one side, then it is a signe the Hawke is full of grease inwardly, which is not broken nor dissolued; and then you shall giue her a scouring, which is a much stronger purgation, and of Scourings the gentlest, next casting, is to take foure or fve Pellets of the yellow roote of Selladine, well censed from filth, being as bigge as great Pease, and giue them out of water early in a Morning, when the Hawke is fasting, and it will cleanse her mightily. If you take these pellets of Selladine, and giue them out of the oyle of Roses, or out of the sirrup of Roses, it is a most excellent scouring also, onely it will for an houre or two make the Hawke somewhat sickish. If you giue your Hawke a little *Aloes Cicatrine*, as much as a Beane wrapt vp in her meate, it is a most soueraigne scouring, and doth not onely auoyde grease, but also killeth all sorts of wormes whatsoeuer.

If your Hawke by ouer-flying, or too soone flying, be heated and inflamed in her body, as they are much subiect thereunto: you shall then to coole their bodies, giue them Stones. These Stones are very fine white pibbles, lying in the sands of grauely rivers, the bignesse whereof you may chuse according to the bignesse of your Hawke, as some no bigger then a Beane, and those be for *Merlins* or *Hobbies*; some as bigge as two Beanes, and they are for *Faulcons-gentle*, *Lanners*, and such like; and some much bigger then they, which are for

for Gerfaulcons, or such like. And these Stones if they be full of crefts and welts, they are the better, for the roughest stone is the best, so it be smooth and not greety. And you shall vnderstand that Stones are most proper for long-wing'd Hawkes, and the number which you shall give at the most must neuer exceede fifteene, for seauen is a good number, so is nine or eleauen, according as you finde the Hawkes heate, more or lesse: and these Stones must euer be given out of faire water, hauing beene before very well pickt and trim'd from all durt or filthinesse. And thus much of Hawkes Castings, Scowrings, & stones.

CHAP. II.

Of Impostumes in Hawkes.

IF your Hawke haue any impostume rising vpon her, which is apparant to be seene, you shall take sweet *Raysins*, and boyle them in *Wine*, and then crushing them, lay them warme to the sore, and it will both ripen and heale it: onely it shall be good to scoure your Hawke very well inwardly, for that will abate the fluxe of all euill humours.

CHAP. III.

Of all sorts of sore eyes.

FOR any sore Eye there is nothing better then to take the iuyce of ground *Iuie*, and drop it into the eye. But if any filme or web be growne before you vse this medicine, then you shall take *Ginger* finely fearst, and blow it into the eye, and it will breake the filme, then vse the iuyce of *Iuie*, and it will weare it away.

CHAP. IIIR.

Of the Pantas in Hawkes.

THE Pantas is a stopping or shortnesse of winde in Hawkes. And the cure is, to give her the scowring of *Selbadine*, and the oyle of *Roses*, & then to wash her meate in the decoction of *Tussilaginis*, and it will helpe her.

CHAP. V.

Of Casting the Gorge.

The cure.

THis is when a Hawke, either through meate which she cannot digest, or through surfet in feeding, casteth vp the meate which she hath eaten, which is most dangerous: And the onely way to cure her is to keepe her fasting, and to feede her with a very little at once of warme bloudy meate, as not aboue halfe a Sparrow at a time, and be sure neuer to feede her againe till shee haue indued the first.

CHAP. VI.

Of all sorts of Wormes or Fylanders in Hawkes.

Wormes or Fylanders, which are a kinde of wormes in Hawkes, are either inward or outward: Inward, as in the guts or intrailles, or outward, as in any ioynt or member: if they be inward, the scowling of *Aloes* is excellent to kill them; but if they be outward, then you shall bathe the place with the iuyce of the hearbe *Ameos* mixt with *Hony*.

CHAP. VII.

Of all swellings in Hawkes feete, and of the Pin in the foote.

FOR the Pinne in the sole of the Hawkes foote, or for any swelling vpon the foote, whether it be soft or hard, there is not any thing more soueraigne, then to bathe it in *Rach-grease* moulten and applied to exceeding hot, and then to fold a fine Cambricke rag dipt in the same greafe about the fore.

CHAP. VIII.

Of the breaking of a Pounce.

The cure.

THis is a very dangerous hurt in Hawkes, especially in Gerfaulcons; for if you shall breake or rine her Pounce, or but coape it so short that she bleede, though it be very little, yet it will indanger her life. The cure therefore is presently vpon the hurt with a hot wyar to

seare

seare it till the bloud staunch, and then to drop about it *Pitch* of Burgundy, and *Waxe* mixt together, or for want thereof a little hard Marchants *Waxe*, and that will both heale it, and make the Pounce grow.

CHAP. IX.

Of bones broke, or out of ioynt.

IF your Hawke haue any bone broke or misplaced; you shall after you haue set it, bathe it with the oyle of *Mandrag*, and *Swallowes*, mixt together, and then Iplent it, and in nine daies it will be knit, and haue gotten strength.

CHAP. X.

Of inward bruising in Hawkes.

IF your Hawke either by stooping amongst trees, or by the incounter of some fowle, get any inward bruise, which you shall know by the blacknesse or bloodinesse of their mutes, you shall then annoynt her meate euery time you feede her with *Sperma-Cæta* till her mutes be cleare againe, and let her meate be warme and bloudy.

CHAP. XI.

Of killing of Lice.

IF your Hawke be troubled with Lyce, which is a generall infirmitie, & apparant, for you shall see them creepe all ouer on the outside of her feathers if she stand but in the ayre of the fire. You shall bathe her all ouer in warme *Water* and *Pepper* small beaten, but be sure that the *Water* be not too hot, for that is dangerous.

CHAP. XII.

Of the Rye in Hawkes.

THIS disease of the Rye in Hawkes proceedeth from two causes; the one is cold and poze in the head, the other is foule and most vncleane feeding, the Faulconer being negligent to seake and cleanse his Hawkes beake and nares, but suffering the bloud and filthinesse of meate to sticke and cleaue thereunto. For indeede, the
infirmitie

The cure.

infirmities is nothing else but a stopping vp of the nares, by meanes whereof the Hawke not being able to cast and auoide the corruption of her head, it turnes to putrefaction, and in short space kills the Hawke: and this disease is a great deale more incident to short-wing'd Hawkes then to long. The signes whereof are apparant by the stopping of the nares. The cure is, to let your Hawke tyer much vpon sinewie & bony meat, as the rumps of Mutton (the fat being taken away) or the pynions of the wings of fowle, either being well lapt in a good handfull of *Par-seley*, and forcing her to straine hard in the tearing of the same, and with much diligence to cleanse and wash her beake cleane with water after her feeding, especially if her meate were warme and bloudy.

CHAP. XIII.
Of the Frounce.

The cure.

THE Frounce is a cankerous vlcer in a Hawks mouth, got by ouer-flying, or other inflammation proceeding from the inward parts; foule and vncleane food is also a great ingenderer of this disease. The signes are a forenesse in the Hawkes mouth, which sore will be fur'd and couer'd ouer with white scurfe or such like filthinesse; also if the vlcer be deepe and ill, the Hawke will winde and turne her head awrie, making her beake stand vpright: and the cure is to take *Allome*, and hauing beaten it to fine powder, mixe it with strong *Wine-vinegar*, till it be somewhat thicke, and then wash and rubbe the sore therewith, till it be raw, and that the scurfe be cleane taken away. Then take the iuyce of *Lolliam*, and the iuyce of *Radish*, and mixing it with *Salt*, annoynt the sore therewith, and in few daies it will cure it.

CHAP.

CHAR. XIII.

Of the Rhume.

THe Rhume is a continuall running or dropping at the Hawkes Nares, proceeding from a generall cold, or else from ouer-flying, and then a sodaine cold taken thereupon: it stoppeth the head, and breeds much corruption therein; and the signes are the dropping before said, and a generall heauinesse, and sometimes a swelling of the head. The cure is, to take the iuyce of *Beets*, and squirt it oft into the Hawkes nares. Then when you feede her, wash her meate in the iuyce of *Broomewort*, and it will quickly purge, and set her found.

The cure.

CHAP. XV.

Of the Formicas in Hawkes.

THe Formicas in Hawkes is a hard horne growing vpon the beake of a Hawke, ingendered by a poysonous and cankerous worme, which fretting the skin and tender yellow welt betwene the head and the beake, occasioneth that hard horne or excreffion to grow and offend the Bird. The signe is the apparant sight of the horne. And the cure is to take a litle of a *Bulls gall*, and beating it with *Aloes*, annoynt the Hawks beake therewith Morning and Euening, and it will in very few daies take the horne away.

The cure.

CHAP. XVI.

Of the Fistula in Hawkes.

THe Fistula in Hawkes is a cankerous hollow vicer in any part of a Hawkes body, as it is in men, beasts, or any other creature: the signes are a continuall mattering or running of the sore, and a thinne sharpe water like lie, which as it fals from the same will fret the sound parts as it goeth. The cure is with a fine small wyar, little stronger then a Virginal wyar, and wrapt close about with a soft fleaued silke, and the poynt blunt and

The cure.

soft, to sear the hollownesse and crookednes of the vicer, which the pliantnesse of the wyar will easily doe, and then having found out the bottome thereof, draw forth the wyar, and according to the bignesse of the Orifice, make a tent of fine lint being wet, which may likewise bend as the wyer did, and be within a very little as long as the vicer is deepe, for to tent it to the full length is ill, and will rather increasethen diminish the Fistula: and therefore ever as the Fistula heales, you must make the tent shorter and shorter. But to the purpose, when you have made your tent fit, you shall first take strong *Allome* water, and with a small serindge, squirt the sore three or foure times therewith, for that will cleanse, drie, and scour euery hollownesse in the ulcer: then take the tent, and annoint it with the iuyce of the hearbe *Robur*, *Vinegar*, and *Allome* mixt together, and it will drie vp the sore.

CHAP. XVII.

Of the prime euill in Hawkes.

THe prime euill in Hawkes is a secret heart-sicknesse procured either by over-flying, corrupt food, cold, or other disorderly keeping, but most especially for want of Stones or casting in the due season: the signes are heavinesse of head, and countenance, euill ending of her meate, and foule blacke mutings. The cure is to take Morning and Euening a good peece of a warme *Sheepes* heart, and steeping it either in new *Asses Milke*, or new *Goats Milke*, or for want of both, the new *Milke* of a red Cow, with the same to feede your Hawke till you see her strength and lust recovered.

The cure:

CHAP. XVIII.

Of wounds in Hawkes.

HAwkes by the crosse encounters of Fowles, especially the Heron, by stooping amongst Bushes, Thornes, Trees,

Trees, and by diuers such accidents, doe many times catch sore and most grienous wounds: the signes whereof are the outward apparance of the same. And the cure is, if they be long and deepe, and in places that you may conveniently, first to flitch them vp, and then to taint them vp with a little ordinary *Balsamum*, and it is a present remedy. But if it be in such a place as you cannot come to flitch it vp, you shall then onely take a little *Lint*, and dip it in the iuyce of the hearbe called *Moufearre*, and apply it to the sore, and it will in short space heale it. But if it be in such a place as you can by no meanes binde any thing thereunto, you shall then onely annoynt or bathe the place with the aforesaid iuyce, and it will heale and dry vp the same in very short time; the iuyce of the greene hearbe, called with vs, *English Tobacco*, will likewise doe the same: for it hath a very speedy course in healing and cleansing, as hath beene approoued by diners of the best Faulconers of this Kingdome, & other nations.

The cure.

CHAP. XIX.

Of the Apoplexie, or falling euill in Hawkes.

THE Apoplexie or falling euill in Hawkes, is a certaine vertigo or dizinesse of the braine, proceeding from the oppression of cold humors, which doe for a certaine space numbe, and as it were mortifie the senses: the signes are a sodaine turning vp of the Hawkes head, and falling from her perch without baiting, but onely with a generall trembling ouer all the body, and lying so, as it were, in a trance a little space, thee presently recouereth, and riseth vp againe, but is sicke and heauy many houres after. The cure therefore is, to gather the hearbe *Asterion*, when the Moone is in the Waine, and in the signe *Virgo*, and taking the iuyce thereof to wash your

The cure.

Hawkes meate therein, and so feede her, and it hath beene found a most soueraigne medicine.

CHAP. XX.

Of the purging of Hawkes.

THere is nothing more needfull to Hawkes then purgations and cleansings; for they are much subiect to fat and foulness of body inwardly, and their exercise being much and violent, if there be neglect, and that their glut be not taken away, it will breede sicknesse and death; therefore it is the part of euery skilfull Faulconer to vnderstand how, and when to purge his Hawke, which is generally euer before she be brought to flying: and the most vsuallest season for the same, is before the beginning of *Autumne*, for commonly knowing Gentlemen will not flie at the Partridge till Corne be from the ground; and if he prepare for the Riuer early, hee will likewise begin about that season: the best purgation then that you can giue your Hawke, is *Aloes Citrine*, wrapt vp in warme meate, the quantitie of a French Pease, and so giuen the Hawke to eate euer the next morning after she hath flowne at any traine, or taken other exercise, whereby she might breake or dissolve the grease within her.

CHAP. XXI.

For a Hawke that cannot mute.

IF your Hawke cannot mute, as it is a common infirmity which happeneth vnto them; you shall take the leane of Porke, being newly kild, whilst it is warme, to the quantitie of two Wall-nuts, and lapping a little *Aloes* therein, giue it the Hawke to eate, and it will presently helpe her. There be diuers good Faulconers, in this case, which will take the roots of *Selandine*, and hauing cleansed it, and cut it into little square pieces as big as Pease, doe steepe it in the Oyle of Roses, and so make the

the Hawke swallow downe three or foure of them: and fore this is very good and wholesome, onely it will make the Hawke exceeding sicke for two or three houres after. Neither must the Hawke be in any weake state of body, when this latter medicine is giuen her. Also, you must obserue to keepe your Hawke at those times exceeding warme, and much on your fist, and to feed her most with warme Birds, least otherwise you clung and dry vp her intrailles too much, which is both dangerous and mortall.

CHAP. XXII.

The assuredst signe to know when a Hawke is sicke.

HAwkes are generally of such a stout, strong, and vnyielding nature, that they will many times couer and conceale their sicknesses so long till they be growne to that extremitie, that no helpe of physicke or other knowledge can auaille for their safeties: for when the countenance, or decay of stomacke, which are the ordinary outward faces of infirmities, appeare, then commonly is the disease past remedy: therefore to preuent that euill, and to know sicknesse whilest it may be cured, you shall take your Hawke, and turning vp her traine, if you see that her tuell or fundament either swel- leth or looketh red, or if her eyes or nares likewise be of a fiery complexion, it is a most infallible signe that the Hawke is sicke, and much out of temper.

CHAP. XXIII.

Of the Feauer in Hawkes.

HAwkes are as much subiect to Feauers, as any creatures whatsoeuer, and for the most part they proceede from ouerflying, or other extraordinary heates, mixt with sodaine coldes, giuen them by the negligence of vnskilfull keepers: and the cure is, to set her in a coole

The cure.

place, vpon a pearch wrapt about with wet cloathes, and feed her off with a little at a time of Chickens flesh, steeped in water, wherein hath bene soaked Cowcumber feedes. But if you finde by the stopping of her nares or head, that she is offended more with cold then heat, then you shall set her in a warme place, and feed her with the bloody flesh of Pidgeons, waht either in white wine, or in water, wherein hath bene boyled either Sage, Marjoram, or Camomill.

CHAP. XXIII.

To helpe a Hawke that cannot digest or indewe her Meate.

IF your Hawke be hard of digestion, and neither can turne it ouer, nor empty her panell, which is very often scene, you shall then take the heart of a Frog, and thrust it downe into her throat, and pull it backe againe by a thread fastened thereunto once or twice sodainely, and it will either make her endewe or cast her gorge presently.

CHAP. XXV.

Of the Gout in Hawkes.

The cure.

HAwkes, especially those which are free and strong strikers, are infinitely subiect to the Gout, which is a swelling, knotting, and contracting of a Hawkes feet. The cure thereof is, to take two or three drops of blood from her thye-veine, a little aboue her knee, and then annoynt her feet with the iuyce of the hearbe *Hollyhocke*, and let all her Pearch be annointed also with *Tallow*, and the iuyce of that hearbe mixt together. Now, if this disease (as oft it happeneth) be in a Hawkes wing, then you shall take two or three drops of blood from the veine vnder her wing, and then annoynt the pinions and inside thereof with *Vnguentum de Althea*, made very warme, which you may buy of euery Pothecary.

CHAP.

CHAP. XXVI.

Of the staunching of bloud.

IT is a knowne experience amongst the best Faulconers, that if the Gerfaulcon shall but loose two or three drops of bloud, it is mortall, and the Hawke will die suddenly after; which to prevent, if the bloud proceede from any pounce, which is most ordinary, then vpon the instant hurt, you shall take a little hard Merchants Wax, and drop it vpon the soare, and it will presently stop it: If it be vpon any other part of the Hawkes body, you shall clap thereunto a little of the soft Downe of a Hare, and it will immediately stanch it; and without these two things a good Faulconer should neuer goe, for they are to be vsed in a moment. And thus much of the Hawke, and her diseases.

The end of the Hawke.

of

Of Bees.

CHAPTER. I.

Of the nature, ordering, and preservation of Bees.

The nature
of the Bee.

OF all the creatures which are behouefull for the vse of man, there is none more necessary, wholesome, or more profitable then the Bee, nor any lesse troublesome, or lesse chargeable. To speake then first of the nature of Bees; it is a creature gentle, louing, and familiar about the man, which hath the ordering of them, so become neat, sweet, and cleanly amongst them; otherwise, if he haue strong, and ill smelling fauours about him, they are curst and malicious, and will sting spitefully: they are exceeding industrious, and much giuen to labour, they haue a kinde of government amongst themselves, as it were a wel-ordered Commonwealth: euery one obeying and following their King or Commander, whose voyce (if you lay your eare to the Hiue) you shall distinguish from the rest, being louder and greater, and beating with a more solemne measure. They delight to liue amongst the sweetest hearbs and flowers that may be; especially Fennell, and Wall-gilly-flowers, and therefore their best dwellings are in Gardens: and in these Gardens, or neere adioyning thereunto, would be diuers Fruit-trees growing, chiefly Plumbe-trees, or Peach-trees, in which, when they cast, they may knit, without taking any farre flight, or wandering to finde out their rest: this Garden also would be well fenced, that no Swine nor other Cattell may come therein, as well for ouerthrowing their Hiues, as also for offending them with other ill-fauours. They are also very tender, and

and may by no meanes endure any cold: wherefore you must haue a great respect to haue their houses exceeding warme, close, and tight: both to keepe out the frosts and snowes, as also the wet and raine; which if it once enter into the Hiue, it is a present destruction.

To speake then of the Bee-hiue, you shall know there be diuers opinions touching the same, according to the customes and natures of Countries; for in the Champaine Countreyes, where there is very little store of woods, they make their Hiues of long Rye-straw, the stoules being sowed together with Bryers; and these Hiues are large and deepe, and even proportioned like a *Sugar-loafe*, and crosse-bard within, with flat splints of wood, both above and vnder the middest part: in other Champain Countreyes, where there wanteth Rye-straw, they make them of Wheat-straw, as in the West Countreyes; and these Hiues are of a good compasse, but very low and flat, which is naught: for a Hiue is euer better for his largenesse, and keepeth out rayne best, when it is sharpest. In the Wood-Countries, they make them of clouen baskets, watheld about, broad splints of Ash, and so formed as before I said, like a *Sugar-loafe*. And these Hiues are of all other the best, so they be large and smooth within; for the straw-Hiue is subiect to breed Mice, and nothing destroyeth Bees sooner then they, yet you must be gouerned by your ability, and such things as the soyle affords.

Now for the Wood-Hiue, which is the best, you shall thus trimme and prepare it for your Bees: you shall first make a stiffe mortar of Lime and Cow-dung, mixed together, and then hauing crosse-barr'd the Hiue within, daube the outside of the Hiue with the mortar, at least three inches thicke, downe close vnto the stone, so

Of the Bee-
Hiue.

The trim-
ming of
the Hiue.

that the least ayre may not come in: then taking a Rye
straw, or Wheate-straw that is new thrashed, and bind-
ding the eares together in one lump, put it over the
Hive, and so as it were thatch it all over, and fixe it close
to the Hive with an old hoope, or garth, and this will
keepe the Hives inwardly as warme as may be: also be-
fore you lodge any Bee in your Hives, you shall perfume
it with *Juniper*, and rub it all within with *Fennell*, *Rose*, and
Time-flowers, and also all the stone vpon which the Hives
shall stand.

The placing
of Hives.

Now for the placing of your Hives, you shall take
three long thicke stakes, cut smooth and plaine vpon the
heads, & driue them into the earth triangular wise, so that
they may be about two foote about the ground: then
lay over them a broad smooth paving stone, which may
extend every way over the stakes about halfe a foot, and
vpon the stone let your Hives, being tette in compass
then the stone by more then sixe inches every way, and
see the doore of your Hives stand directly vpon the rising
of the Morning-Sun, inclining a litle vnto the South-
ward: and be sure to haue your Hives well sheltered from
the North-winds, and generally from all tempestuous
weather: for which purpose if you haue sleds to draw o-
uer them in the winter, it is so much the better. And you
shall place your Hives in orderly rowes one before ano-
ther, keeping cleane Allies betwene them every way, so
as you may walke and view each by it selfe fearfully.

The casting
of Bees and
ordering of
Swarmes.

Now for the casting of your Bees, it is either or later
in the yeare, according to the strength and goodnesse of
the stocke, or the warmth of the weather. The best
time for casting, is from the beginning of May, till the
middle of July, and in all that time you must haue a
vigilant eye, or else some seruant, to watch their rising,

least.

least they flye away, and knit in some obscure place far from your knowledge. Yet if you please you may know which Hives are ready to cast a night before they do cast, by laying your eare after Sun-set to the Hieve, and if you heare the Master-Bee aboue all the rest, in a higher and more solemne note, or if you see them lie forth vpon the stone, and cannot get into the Hieve, then bee sure that stocke will cast within few houres after. As soone as you perceiue the swarme to rise, and are got vp into the ayre (which will commonly be in the height and heat of the Sun) you shall take a brasse Basen, Pan, or Candlesticke, and make a tinckling noise thereupon, and they are so delighted with Musicke, that by the sound thereof, they will presently knit vpon some branch or bough of a tree. Then when they are all vpon one cluster, you shall take a new sweet Hieve well drest, and rub'd with *Hony* and *Resinell*, and shake them all into the Hieve, then hauing spread a faice sheet vpon the ground, set the Hieve thereon, and couer it all cleane ouer close with the sheet, and so let it stand till after Sunne-set, at which time the Bees being gathered vp to the top of the Hieve (as their nature is) you shall set them vpon the stone, hauing rub'd it well with *Resinell*, and then daube it close round about with *Lime* and *Dung* mixt together, and onely leaue them a dore or two to issue out and in at. There be some stockes which will cast twice or thrice, and foure times in a yeare, but it is not so good, for it will weaken the stocke too much, therefore to keepe your stockes in strength and goodnesse, it is good not to suffer any to cast aboue twice at the most. Again, you shall with pieces of Bricke, or other smooth stones, raise the stocke in the night three or foure inches aboue the stone, and then daube it close againe, and the Bees finding house-

Old
new

The
nation of
weak
Bees

roome will fall to worke within, and not cast at all; and then will that stocke be worth two others: and in the same manner, if you had the yeare before any small swarmes, which are likely to cast this yeare; or if you have any early swarmes this yeare, which are likely to cast at the latter end of the yeare: both which are known found to be the destruction of the stockes: in either of these cases, you shall enlarge the Hine as it is before said, by raising it vp from the stone, and it will not only keepe them from casting, but make the stocke better, and of much more profit, for that Hine end which is of the most weight is of the best price.

Of selling
hives.

Now when you haue mark't out those olde stockes which you intend to sell, (for the oldest is fittest for that purpose) you shall know that the best time to take them, is at Michaelmas, before any frosts hinder their labours: and you shall take them euer from the stone in the dark of night, when the ayre is cold, and either drowne them in water, or smother them with *Glasse*, for to chase them from their Hives, as some doe is taught; because all such Bees as are thus frightened from their Hives doe turne robbers and spoyle other stockes; because that time of the yeare will not suffer them to labour and get their owne liuings.

The prefer-
uation of
weake
stockes.

Now if you haue any weakes swarmes which comming late in the yeare cannot gather sufficient of Winter provision; in this case, you shall feed such stockes by daily smearing their stone before the place of their going in and out with *Hony* and *Rose-water* mixt together, and so you shall continue to doe all the strength of Winter, till the warmth of the Spring, and the Sonne shine bring forth Flowers for them to labour vpon: You shall continually looke that no *Mice*, *Dares*, and such like ver-

mine.

mine bread about Hives, for they are pey (enough) and will make Bees forsake their Hives.

Now lastly if any of your stocker happen to die in the Winter, as amongst many, I have much quailed, you

An excellent secret.

shall not by any meanes stirre the stock, but let it remaine till the Spring, that you see your Bees begin to grow by

the; then take up the dead stocker; and trimme it cleane from all Mith, but by no meanes stirre or crush any of the

Combes; then dash the Combes, and beeprinckle them, and besmear all the inside of the Hive with Honey, Rose

water, and the iuyce of Fenell, mixt together; and daube all the stone therewith. Also then set downe the Hive

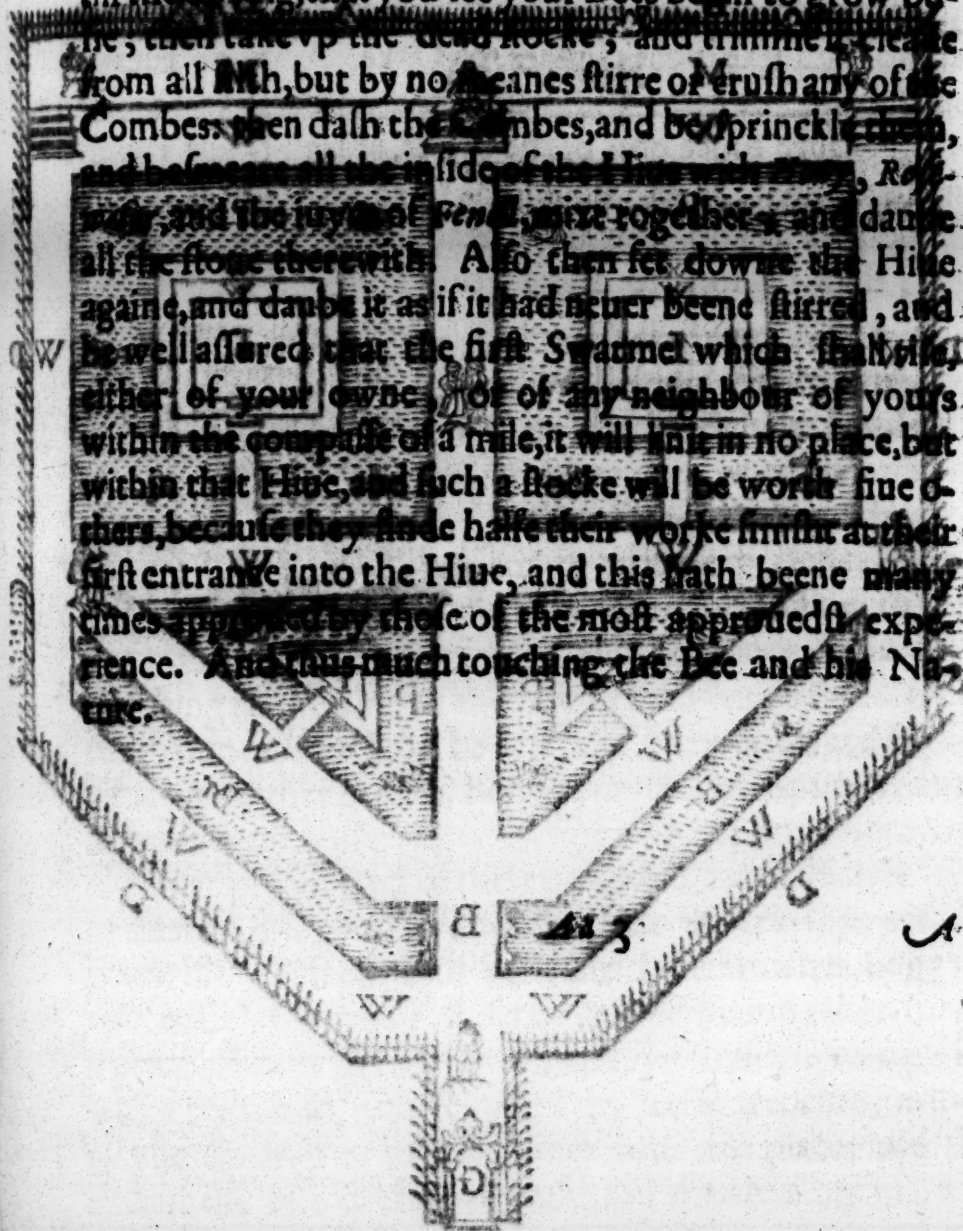
again, and daube it as if it had neuer beene stirred, and be well assured that the first Swarmel which shall issue

either of your owne, or of any neighbour of yours within the compasse of a mile, it will hie in no place, but

within that Hive, and such a stocke will be worth five others, because they finde halfe their worke finish at their

first entrance into the Hive, and this hath beene many times approved by those of the most approved experience.

And thus much touching the Bee and his Nature.



G. The
Orie

D. The
Duch and
Quick-lee
bedge

W. The
Walker

B. The
Bidge

B. The
Brooke

B. The
Borde

A. The
Pentice

M. The
Mount

C. The
Spring
bord

Your Pond, which although it be the lowest part in the
 true, high, or low ground, yet it shall be the best
 place for it, and the trench drive in great stakes of like foote is
 of the trench drive in great stakes of like foote is
 length, and six inches deep, and the head of the trench
 but the best is the best, and the head of the trench
 within four foote one of the other, at least four foote
 into the earth as broad as the trench, and the head of the trench
 Flood-gate as you intend the head of the pond, shall
 goe: then beginne to digge your Pond of such com-
 Or as much as great Rivers, do

CHAPTER I
 Of Fishing in the head of the pond, shall
 Fish pond.

Or as much as great Rivers, do
 generally belonge to the
 King, or the particular Lords of
 feuerall Mannors, and that it is
 onely the Fish-pond which be-
 longeth to private persons, I will
 as a thing most belonging to the
 general profit, here treat of Fish-ponds. And first
 touching the making of them, you shall vnderstand that
 the grounds most fit to be cast into Fish-ponds, are those
 which are either marish, boggy, or full of Springs, and
 indeede most vnit either for grazing, or any other use
 of better profit. And of these grounds, that which is full
 of cleare Springs will yeelde the best water: that which
 is marish will yeelde Fish best, and that which is boggy,
 will best defend the Fish from heauy fishing then such
 a piece of waste ground, and being determined to cast it
 into a Fish-pond, you shall first, by small trenches, draw
 all the Springs or moynt veins into one place, and so
 draine the rest of the ground, and then hauing markt
 out that part which you meane to make the head of
 your

your Pond, which although it be the lowest part in the true booke of the ground, yet you must make it the highest in the art: you shall first cut the trench of your Flood-gate as you have said, and then on each side of the trench drive in great stakes of fixe foote in length, and fixe inches square of Oake, Ashe, or Elme, but Elme is the best: and these you must drive in rows within foure foote one of the other, at least foure foote into the earth, as broad, and as farre off each side the Flood-gate as you intend the head of your Pond shall goe: then beginne to digge your Pond of such compass as your ground will conveniently give you leave, and all the earth you dig out of the Pond, you shall carry and throw amongst the stakes, and with strong rammers ramme the earth hard betweene them till you have covered all the stakes: then drive in as many more new stakes beside the heads of the first, and then ramme the earth over and above them also: and thus doe the stakes above stakes till you have brought the head and sides to such a convenient height as is fitting. And in all this worke have an especiall care that you make the inside of your bankes so smooth, even and strong that no current of the water may weare the earth from the stakes. You shall digge your Pond not above eight foot deepe, and so as it may carry not above fixe foote water. You shall pane all the bottome, and bankes of the Pond with large loads of Flats-grasse, which naturally growes under water for it is a great feeder of Fish: and you shall lay them very close together, and pinge them downe fast with small stakes and windings. You shall upon one side of the Pond, in the bottome, make fast divers Bayens or Eggots of brack-wood, wherein

your

your fish shall cast their spawn, for that will defend it from destruction; and at another place you shall lay sods vpon sods, with the grasse sides together, in the bottome of the Pond, for that will nourish and breed Eeles: and if you sticke sharpe stakes slant-wise by euery side of the Pond, that will keepe theeues from robbing them. When you haue thus made your Ponds, and haue let in the water, you shall then store them. Carpe, Breame and Tench by themselves; and Pike, Pearch, Eele, and Tench by themselves: for the Tench being the Fishes Physition is seldome deuoured: also in all Ponds you shall put good store of Roch, Dace, Loch, and Menow; for they are both food for the greater Fishes, and also not vncomely in any good mans dish. You shall to euery melter put three spawners, and some put five, and in three yeeres the increase will be great, but in five hardly to be destroyed. And thus much for Ponds and their storings.

CHAP. II.

Of the taking of all sorts of Fish, with Nets, or otherwise.

If you will take Fish with little or no trouble, you shall take of *Salarmoniacke* a quarter of an ounce, of young *Chines* as much, and as much of a Calues Kell, and beate them in a Mortertill it be all one substance, and then make Pellets thereof, and cast them into any corner of the Pond, and it will draw thither all the Carpe, Breame, Chenuin, or Barbell, that are within the water; then cast your shoue-net beyond them, and you shall take choyse at your pleasure. If you will take Roch, Dace, or any small kinde of Fish, take Wine-Lees and mixe it with Oyle, and hang it in a Chimney-corner, till it be drie, or looke blacke, and then putting it into the water; they will come so abundantly to it, that you may take them with your hand. If you will take Trout, or Grailing, take two

pound of Wheate-bran, halfe so much of white Pease, and mixing them with strong Brine, beate it till it come to a perfect paste; then put pellets thereof into any corner of the water, and they will resort thither, so as you may cast your net about them at your pleasure. But if you will take either Perch or Pike, you shall take some of a beasts Litter, blacke Snails, yellow Butter, Flies, Hogges blood, and Opoponax, beate them all together, and having made a paste thereof, put it into the water, and be assured that as many as are within fornic places thereof will presently come thither, and you may take them at your pleasure. Lastly, if you take eight drammes of Cocke stones, and the kintles of Pynapple trees burnt twice so much, and beate them well together, and make round balles thereof, & put it into the water, either fresh or salt, any Salmon or great Fish will presently resort thither: and you may take them either with net or otherwise. Also, it is a most approued experiment, that if you take bottles made of Hay, and Greene Oziers, or Willow mixt together, and sincke them downe in the midst of your Pond, or by the banke sides, and so let them rest two or three daies, hauing a corde so fastened vnto them that you may twitch them vpon land at your pleasure: and beleue it, all the good Eeles which are in the Pond will come into those Bottles, and you shall take them most abundantly: and if you please to baite those bottles, by binding vp Sheepes guts, or other garbage of beasts within them, the Eeles will come sooner, and you may draw them oftner, and with better assurance. There be other wayes besides these to take Eeles, as with Vveeles, with the Eele-speare, or with bobbing for them with great wormes; but they are so generally knowne and practised, and so much inferiour to this already.

already shewed, that I holde it a needlesse and vaine labour to trouble your eares with the repetition of the same; and the rather, sith in this worke I haue laboured onely to declare the secrets of euery knowledge, and not to runne into any large circumstance of those things which are most common and familiar to all men. And thus much of Fish, and their generall knowledge.

(* *)

FINIS.

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labour to trouble your eares with the repetition of the
same; and the rather, sith in this worke I haue laboured
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not to runne into any large circumstance of those
things which are most common and familiar
to all men. And thus much of Fish, and
their generall knowledge.

(* *)

FINIS.

COVNTREY³ Contentments,

OR

The English Husvife.

CONTAINING

The inward and outward Vertues which
ought to be in a compleate Woman.

*As her skill in Physicke, Surgerie, Extraction
of Oyles, Banqueting-stuffe, Ordering of great Feasts,
Preseruing of all sorts of Wines, Conceited Secrets,
Distillations, Perfumes, ordering of Wooll, Hempe, Flax,
making Cloth, Dying, the knowledge of Dayries,
office of Malting, Oats, their excellent vses
in a Family, Brewing, Baking, and all
other things belonging to
an Household.*

A Worke generally approued, and now much augmented, purged
and made most profitable and necessarie for all men, and De-
dicated to the Honour of the Noble House of Exceter,
and the generall good of this Kingdome.

By G. M.

Printed at London by I. B. for R. Iackson. and are to be sold at his shop
neere Fleet-streete Conduit. 1623.

GOVERNMENT

Commitments

of

The English Habeas

The new and enlarged volume which
contains the whole of the

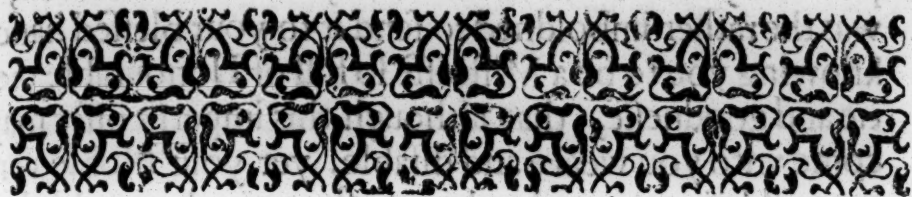
Notes and Observations on the
Habeas Corpus Act of 1789

by
J. H. B. Esq. of the Middle Temple
and Barrister at Law

A Work which will be found
of great use to the
Practitioner and the Student

373523

By
J. H. B. Esq. of the Middle Temple
and Barrister at Law



TO THE RIGHT
HONOURABLE AND
MOST EXCELLENT
of all Ladies, FRANCES,
Countesse Dowager of
Exceter.



Owfoeuer (Right Honourable and most
vertuous Ladie) this Booke may come
to your Noble Goodnesse clothed in an
old Name or Garment, yet doubtlesse
(excellent Madam) it is full of many
new vertues which will euer admire and
serue you; and though it can adde nothing to your owne
rare and vnparalleld knowledge, yet may it to those No-
ble good ones (which will endeauour any small sparke of
your imitation) bring such a light, as may make them
shine with a great deale of charitie. I doe not assume to
my selfe (though I am not altogether ignorant in abilitie
to iudge of these things) the full inuention and scope of
this whole worke: for it is true (great Lady) that much
of it was a Manuscript which many yeeres agoe belon-
ged to an Honourable Contesse, one of the greatest Glo-
ries of our Kingdome, and were the opinions of the grea-
test Physitions which then liued; which being now ap-

The Epistle Dedicatory.

proued by one not inferiour to any of that Profession, I was the rather imboldned to send it to your blessed hand, knowing you to be a Mistresse so full of Honourable pietie and goodnesse, that although, this imperfit offer may come vnto you weake and disable, yet your Noble vertue will support it, and make it so strong in the world, that I doubt not but it shall doe seruice to all those which will serue you, whilst my selfe and my poore prayers shall to my last gaspe labour to attend you.

The true admirer of your
Noble Vertues,

GERVASE MARKHAM.

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Country Contentments,

OR

The approued Booke called the *English Houſ-wife.*

Containing all the vertuous knowledges and ac-
tions both of minde and body, which ought to
bee in any compleat Houſ-wife, of
what degree or calling

CHAP. I.

Of the inward vertues of the minde which ought to be in every
Houſ-wife. And firſt of her generall knowledges both in Phi-
losophie and Sargeerie, with plaine approued medicines for
healthe of the Houſe-hold, alſo the extraction of excellent
Oyles fit for choſe purpoſes.

Having already in a ſummary briefeneſſe paſ-
ſed through thoſe outward parts of huſban-
drie which belong vnto the perſon of the huſband-
man, who is the father and maſter of the fa-
mily, and whole office and employments are
euer for the moſt part abroad, or remoued from the houſe,
as in the field or yarde: It is now meete that we deſcend
in as orderly a method as wee can, to the office of our eng-
liſh

lish Houſ-wife, who is the mother and Miſtris of the family, and hath her moſt generall imployments within the houſe; where from the generall example of her vertues, and the moſt approued ſkill of her knowledges, thoſe of her family may both learne to ſerue God, and ſuſtaine man in that godly & profitable ſort which is required of every true Chriſtian.

A Houſ-wife muſt be religious

First then to ſpeake of the inward vertues of her minde, ſhee ought, about all things, to be of an vpright and ſincere religion, and in the ſame both zealous and conſtant; giuing by her example, an incitement and ſpurre vnto all her family to purſue the ſame ſteppes, and to vtter forth by the inſtruction of her life, thoſe vertuous fruits of good liuing, which ſhall be pleaſing both to God and his creatures; I do not meane that herein ſhe ſhould vtter forth that violence of ſpirit which many of our (vainely accounted pure) women do, drawing a contempt vpon the ordinary Miniſtery, and thinking nothing lawfull but the fantaſies of their own inuentions, vſurping to themſelues a power of preaching and interpreting the holy word, to which only they ought to be but hearers and beleeuers, or at the moſt but modeſt perſwaders, this is not the office either of good Houſ-wife or good woman. But let our english Houſ-wife be a godly, conſtant, and religious woman, learning from the worthy Preacher & her husband, thoſe good examples which ſhee ſhall with all carefull diligence ſee exerciſed amongſt her ſeruants.

In which praſiſe of hers, what particular rules are to be obſerued, I leaue her to learne of them who are profeſſed Diuines, and haue purpoſely written of this argument; onely thus much will I ſay, which each ones experience will teach him to be true, that the more carefull the maſter and miſtris are to bring vp their ſeruants in the dayly exerciſes

cises of Religion toward God, the more faithfull they shall find them in all their businesses towards men, and procure Gods fauour the more plentifully on all the household: & therefore a small time morning and euening bestowed in prayers, and other exercises of religion, will proue no lost time at the weekes end.

Next vnto this sanctity & holinesse of life, it is meete that our English Houf-wife be a woman of great modesty and temperance as well inwardly as outwardly; inwardly, as in her behauiour and cariage towards her husband, wherein she shall shunne all violence of rage, passion and humour, coueting lesse to direct then to-bee directed, appearing euer vnto him pleasant, amiable and delightfull; and though occasion, mishaps, or the misgouernement of his will may induce her to contrarie thoughts, yet vertuously to suppress them, and with a milde sufferance rather to call him home from his error, then with the strength of anger to abate the least sparke of his euill; calling in her minde that euill and vncomely language is deformed though vttered euen to seruants, but most monstrous and vgly when it appears before the presence of a husband: outwardly, as in her apparrell and dyet, both which she shall proportion according to the competency of her husbands estate & calling, making her circle rather straight then large, for it is a rule if we extend to the vttermost we take away increase, if we goe a hayre breadth beyond we enter into consumption: but if we preserue any part, we build strong forts against the aduersaries of fortune, provided that such preservation be honest and conscionable: for as lauish prodigality is brutish, so miserable couetousnesse is hellish. Let therefore the Hus-wifes garments be comely and strong, made as well to preserue the health, as adorne the person, altogether without toyish garnishes, or the glosse of light

*Shee must
bee temperate.*

Of her garments.

Of her diet.

colours, and as farre from the vanity of new and fantaſtique faſhions, as neere to the comely imitations of modeſt Matrons; let her dyet be wholeſome and cleanly, prepared at due howers, and Cookt with care and diligence; let it be rather to ſatiſfie nature then our affections, and apter to kill hunger then reuiue new appetites; let it proceed more from the prouiſion of her owne yarde, then the furniture of the markets; and let it be rather eſteemed for the familiar acquaintance ſhe hath with it, then for the ſtrangeneſſe and raritie it bringeth from other Countries.

Her generall vertues.

To conclude, our English Huſ-wife muſt bee of chaſt thought, ſtout courage, patient, vntyred, watchfull, diligent, witty, pleaſant, conſtant in friendſhip, full of good neighbour-hood, wiſe in diſcourſe, but not frequent therein, ſharpe and quicke of ſpeech, but not bitter or talkatiue, ſecret in her affaires, comfortable in her counſels, and generally ſkilfull in the worthy knowledges which doe belong to her vocation, of all, or moſt part whereof I now intend to ſpeake more largely.

OF
Her vertues in phicke.

To begin then with one of the moſt principall vertues which doth belong to our English houſ-wife; you ſhall vnderſtand, that ſith the preſeruation and care of the family touching their health and ſoundneſſe of body, conſiſteth moſt in the diligence: it is meet that ſhee haue a phicke kinde of knowledge, how to adminiſter many wholeſome receits or medicines for the good of their healthes, as well to preuent the firſt occaſion of ſickneſſe, as to take away the effects and euill of the ſame when it hath made ſeizure on the body. Indeede we muſt confeſſe that the depth and ſecrets of this moſt excellent art of phicke, is farre beyond the capacity of the moſt ſkilfull woman, as lodging onely in the breaſt of the larned Profeſſors, yet that our houſ-wife may from them receiue ſome ordinary rules, and medicines

cines which may auaille for the benefit of her family, is (in our common experience) no derogation at all to that worthy Science: Neither do I intend heere to lead her minde with all the Symptomes, accidents, and effects which goe before or after euery sicknesse, as though I would haue her to assume the name of a Practitioner, but onely relate vnto her some approued medicines, and old doctrines which haue been gathered together, and deliuered by common experience, for the curing of those ordinary sickneses which daily perturb the health of Men and Women.

First then to speake of Feuers or Agues, the Hus-wife shall know those kinds thereof, which are most familiar & ordinary, as the *quoridian* or dayly ague, the *Tertian* or euery other day ague, the *quarten* or euery third dayes ague, the *Pestilent*, which keepeth no order in his fits, but is more dangerous and mortall: And lastly the accidentall feuer which proceedeth from the receit of some wound or other, painfull perturbation of the spirits. There bee sundry other feuers which coming from consumptions, and other long continued sickneses, doe altogether surpass our huswines capacity.

First then for the *quoridian* feuer, (whose fits alwaies last about twelue howers) you shall take a new laid egge, and opening the crowne you shall put out the white, then fill vp the shell with very good *Aquavita*, and stirre it and the yoke very well together, & then as soone as you feele your cold fit begin to come vpon you, suppe vp the egge, and either labour till you sweate, or else laying great store of cloathes vpon you, puttyour selfe in a sweat in your bed, and thus doe whilst your fits continue, and for your drinke let it be onely coole posset ale.

For a single *Tertian* feuer, or each other dayes ague, take

Of feuers
in generall.

Of the *quoridian*.

Of the
single *Tertian*.

same, and put therein a good handfull of *Dandelion*, and then setting it vpon the fire, boyle it till a fourth part bee consumed, then as soone as your cold fit beginneth, drinke a good draught thereof, & then either labour till you sweate, or else force your selfe to sweate in your bed, but labour is much the better, provided that you take not cold after it, and thus doe whilst your fits continue, and in all your sicknesse let your drinke bee posset ale thus boyled with the same herbe.

Of the accidental
Feuer.

For the accidentall Feuer which commeth by meanes of some dangerous wound receiued, although for the most part it is an ill signe, if it be strong and continuing, yet many times it abateth, & the party recouereth when the wound is well tended and comforted with such soueraine balme & hot oyles as are most fit to bee applyed to the member so griened or iniured: therefore in this feuer you must respect the wound from whence the accident doth proceed, and it recouereth, so you shall see the feuer wast and diminish.

Of the Fe-
uer herrick

For the *Herricke* feuer, which is also a very dangerous sicknesse, you shall take the oyle of Violets, & mixe it with a good quantity of the pouder of white *Poppy seed* finely feast, and therewith annoynt the small & raines of the parties backe, euening and morning, and it will not onely giue ease to the feuer, but also purge and cleanse away the dry scalings which is ingendred either by this or any other feuer whatsoeuer.

For any
Feuer.

For any Feuer whatsoeuer, whose fit beginneth with a cold. Take a spoonfull and a halfe of Dragon water, a spoonfull of Rosewater, a spoonfull of running water, a spoonfull of *Aquavite*, and a spoonfull of Vinegar, halfe a spoonfull of *Methridate* or lesse, and beate all these well together, & let the partie drinke it before his fit beginne.

It is to bee vnderstood that all feuers of what kind soeuer *Of thirst*
they bee, and these infectious diseases, as the Pestilence, *in Feuers,*
plague and such like, are thought the inflammation of the
blood, insuely much subiect to drought; so that, should the
party drinke as much as he desired, neither could his body
containe it, nor could the great abundance of drinke do o-
ther then weaken his stomacke, and bring his body to a
certaine destruction: Wherefore, when any man is so o-
uerpressed with desire of drinke, you shall giue him at con-
uenient times, either posserale made with cold hearbs; as
sorrell purslen, violet leaues, lettuce, spinage, and such like,
or else a lulip made as before said in the pestilent feuer, or
some almond milke: and betwixt those times, because the
use of those drinckes will grow wearisome and tothsome to
the patient, you shall suffer him to gargill in his mouth good
wholesome beare or ale, which the patient best liketh, and
hauing gargled it in his mouth, to spicke out againe, & then
to take more, and thus to doe as oft as he pleaseth; till his
mouth be cooled: provided that by no meanes he suffer
any of the drinke to goe downe, and this will much better
allwage the heate of his thirst then if he drinke; and when
appetite desireth drinke to goe downe, then let him take
either his lulip, or his almond milke.

To make a pulvis to cure any sore, take elder leaues and *For any a-*
seeth them in milke, till they bee soft, then take them vp *gue sore.*
and straine them, and then boyle it againe til it be thicke, &
so vse it to the sore as occasion shall serue.

For the *Quartaine* Feuer or third day ague, which is of all *For the*
feuers the lougest lasting, & many times dangerous, because *quartaine*
many times consumptions, blacke iaundys, and such like *Feuer.*
mortal sickneses follow it; you shall take Methridate and
spread it vpon a lymon slice, cut of a reasonable thicknes,
and so as the lymon bee couered with the Methridate;
then.

To make
one sweat.

Of the
pestilent
Feuer.

then bind it to the pulse of the sicke mans wrist of his arme about an houre before his fit doth beginne, & then let him goe to his bed made warme, and with hot cloathes laid to the soles of his feet, and store of clothes laid vpon him, let him trie if he can force himselfe to sweate which he do, then halfe an houre after he hath sweate, hee shall take hot posset ale brewed with a little Methidate, and drinke a good draugb thereof, and rest till his fit bee passed over: but if he be hard to sweate, then with the said posset ale also you shall mixe a few beatusany seeds, and that will bring sweate vpon him: and thus you shall doe every fit till they begin to cease, or than sweate come naturally of it owne accord, which is a true signe that the sicknesse decreaseth. or if the pestilent feuer, which is a continual sickefull of infection, and mortality, you shall cause the party first to be cleare blood, if his strength will beare it: then you shall giue him coole lylps made of endive or succorie water, the sirrop of Xidens, conserue of Barberries, and the iuice of Lymons, well mixed & simboliz'd together: Also you shall giue him to drinke Almond milke made with the dewision of coole herbs, as violet leaues, strybonie leaues, fresh mallowes, purslaine, and fitch hke, and if the parties mouth shall through the heat of his stomacke, or liuer inflame or grow sore, you shall wash it with the sirrop of mulberries, and that will not onely heale it, but also strengthen his stomacke. If (as it is most common in this sicknesse) the party shall grow costive, you shall giue him a suppositary made of honie, boild to the height of hardnesse, which you shall know by cooling a drop thereof, and so if you find it hard, you shall then know that the honie is boiled sufficiently: then put salt to it, and so powder it in water, and worke it into a roule in the manner of a suppositary, & so administer it, and it most assuredly bringeth

thicke like a plaister, and then apply it to the wound of the head warme.

Take a table napkin or any linnen cloath, and wet it in cold water, and when you goe to bed apply it to the swelling and lie vpright; thus doe three or foure times in a night and the swelling wasts. *For the Squynancie.*

Take two or three docke roots, and as many daylie roots, and boyle them in water till they be soft, then take them out of the water, and boyle them well ouer againe in oyle Olyue, then strayne them through a cleane cloath, and anoynt the payned tooth therewith, and keepe your mouth close, and it will not onely take away the payne, but also ease any me-grem or grieve in in the head. *For the toothake.*

Take a sawcer of strong vinegar, and two spoonefulls of the poulder of *Roch allem*, a spoonefull of white salt, and a spoonefull of hony, seeth all these till it be as thinne as water, then put it into a close viall and keepe it, and when occasion serues wash your teeth therewith, with a rough cloath, and rub them soundly, but not to bleed. *To make teeth white.*

Take summe of the eldertree, or the aples of oake trees, and with either of these rub the teeth & gummes and it will loosen them so as you may take them out. *To draw teeth without yron.*

Take Sage and salt, of each alike, and stampe them well together, then take it till it be hard, and make a fine poulder thereof, then therewith rub the teeth euening and morning and it will take away all yellownes. *For teeth that are yelow.*

First let them blood, then take *Harts horne* or *Iuprie* and red *Pympernell*, and bruisse them well together, then put it in to a linnen cloath and lay it to the teeth, & it wil fasten them. *For teeth that are loose.*

Take the iuyce of *Louage* and drop it into the eare, and it cure any venome, and kill any worme, earewigge or other vermine. *For any venome in the eare.*

Take two ounces of comine & beate it in a mortar to fine
D powder

*For a stinking
breath
which cometh
from
the stomacke*

pouder, then boyle it in wine from a pottell to a quart, then drinke thereof morning and euening as hot as you can suffer it, or otherwisetake an ounce of wild time, and being cleane washed cut it small and then pouder it, then put to it halfe an ounce of peper in fine pouder, and as much comyne, myxe them all well together, and boyle them in a pottell of white wine, till halfe be consumed, and after meate (but not before) vse to drinke thereof hot, also once in the afternoone and at your going to bed, and it will purge the breath.

*For stinking
nostrills.*

Take red nettles and burne them to pouder, then add as much of the pouder of pepper, and myxe them well together, and snuffe thereof vp into the nose, and thus do diuers times a day.

*For a canker
in the nose.*

Take old ale, and hauing boyled it on the fire, and clenfd it ad thereto a pretie quantitie of lyfe hony and as much allom, then with a serryndge of such like wash the sores therewith very warme.

*A red wa-
ter for any
canker.*

Take a gallond of running water, and boyle it to a pottell, then put to it a handfull of red sage, a handfull of Cellodyne, a handfull of hony suckles, a handfull of woodbine leaues and flowers, then take a peniworth of graynes made into fine pouder, and boyle all very well together, then put to a quart of the best life hony of a yeare old, and a pound of roch allom, let all boyle together till it come to a pottell, then straine it and put it into a close vessell, and therewith dresse and anoynt the sores as occasion serues, it will heale any canker or vlcer, and cleanse any wound; It is best to be made at Midsummer.

*To cleare
the eyes.*

Take the flowers and roots of primrose cleane wash in running water, then boyle them in faire running water the space of an houre, then put thereto a pretty quantitie of white copperas, and then straine all through a linnin cloath & so let it stand a while, & there will an Oyle appeare vpon the water

water, with that oyle anoynt the lids & the browes of your eyes, and the temples of your head, and with the water wash your eyes, and it is most soueraigne.

Take Fifteene seedes of *Gyneper*, & as many *Gromell* seeds, *Another for the sight.*
 five branches of *Fenell*, beate them all together, then boyle them in a pint of old ale til three parts be wasted, then straine it into a glasse, and drop thereof three drops into each eye at night, and wash your eyes euery morning for the space of fifteene dayes with your owne water, and it will cleare any decayed sight whatsoeuer.

Take red *Snayles*, and seeth them in faire water, and then gather the oyle that aryseth thereof, & therewith anoynt your eyes morning and euening. *For sore eyes*

Take a gallond or two of the dregges of strong ale, & put thereto a handfull or two of *Comyne*, and as much *salt*, and then distill in a *Lymbeck*, and the water is most pretious to wash eyes with. *For sicke eyes.*

Take *Cellondine*, *Rue*, *Chervyle*, *Plantine*, and *anyse*, of each alike, and as much *fenell*, as of all the rest, stampe them al well together, then let it stand two dayes & two nights, then straine it and annoynt your eyes morning and euening therewith. *For bleared eyes.*

Take an *egge*, and rost it extreame hard, then take the whit being very horlapp in it as much white *copperas* as a pease & then violently straine it through a fine cloath, then put a good drop thereof into the eye, and it is most soueraigne. *For the pin and webb in the eye.*

Take two drams of prepard *Tulia*, of *Sandragon* one dram, of *Sugar* a dram, bray them all very well together till they be exceeding small, then take of the poudre and blow a littell thereof into the eye, and it is soueraigne. *A poudre for the pin and webb in the eye.*

Take of *Red rose leaves*, of *Smalladge*, of *Mayden hayre*, *Eusaare*, *endyue*, *succory*, *red fenell*, *hill-wort*, and *cellendyne*, of each halfe a quarter of a pound, wash them cleane & lay the in sleepe in white wine a whole day, then still them in an or- *A pretious water for the eyes.*

dinary still, & the first water will be like gold, the second like silver, & the third like balme, any of these is most pretious for sore eyes, and hath recovered sight lost for the space of Ten yeares, hauing been vsed but foure dayes.

To make
hayre to
grow.

Take the leanes of *wylowe* & boyle them well in oyle & therewith annoynt the place where you would haue any hayre to grow, whether vpon head or beard.

An other

Take *Treacle* water and hony, boyle them together, and wet a cloth therein, and lay it where you would haue hayre to grow, and it will come speedily.

For a pyn-
pled or red-
fauy face.

Take nine or ten eggs and rost them very hard, then put away the yolkes, and bray the whites very small with three or foure ounces of white *Copporas*, till it bee come to perfect oyntment, then with it annoynt the face morning and euening for the space of a weeke and more.

For the
rhume.

Take the rinde of *Issop*, and boyle it or burne it and let the fume or smoke go into the mouth and it will stay any rhume falling from the head.

For hoarres
nesse in the
throate.

Take a pint of running water, and three spoonefulls of hony, and boyle them together and slyme off the filth, then put thereto an ounce of small *Raysons*, and straine it well through a cloath, and so drinke it morning and euening.

For a dan-
gerous
cough.

Take *Aquania* and salt, and mixe it with strong old ale and then heate it on the fire, and therewith wash the soales of the feete when you goe to bed.

For the dry
cough.

Take of cleane Wheate and of cleane Barly of each a like quantitie, and put them into a gallond and a halfe of faire water, and boyle them till they burst, then straine it into a cleane vessell, and ad thereto a quarterne of fine *Lycoras* powder, and two penyworth of gumme, arabicke, then boyle it ouer againe and straine it, and keepe it in a sweete vessell, and drinke thereof morning and euening.

For the tifs-
like.

Take the best wort and let it stand till it bee yellow, then boyle

boyle it & after let it coole, then put to it a quantitie of *barme*, *saffron*, and so drinke of it morning and euening while it lasteth, otherwise take *hore-hound*, *violet leaues*, and *Isop*, of each a handfull, seeth them in water, and put thereto a littell *Saffron*, *Lycheras*, and *Sugar-candy*, after they haue boyled a good while, then straine it into an earthen vessel, & let the sick drinke thereof Sixe, spoonefull at a time morning and euening; or lastly, take the lungs of a Foxe, and lay it in rosewater, or boyle it in rosewater, then take it out and dry it in some hot place without the sunne, then beate it to powder with *Sugar-candy*, and eate of this powder morning and euening.

To ease paine in the stomacke, take *Endiue*, *Mints*, of each a like quantitie, and steepe them in white *Wine* a dayes space, then straining it & adding thereto a little *Cinamon* and *Pepper*, giue it the sicke person to drinke, and if you add thereto a litle of the powder of *Horse-mint* and *Calamint*, it will comfort the stomacke exceedingly, and occasion swift and good digestion.

For spitting of blood, whether it proceede of inward bruises, ouerstraining or such like, you shall take some pitch, and a little *Sperma Ceti*, and mixe it with old ale and drinke it, and it will stay the flux of blood: but if by meanes of the bruise any outward griefe remaine, then you shall take the herbe *Brackell-hempe*, and frying it with sheepes tallow lay it hot to the griued place, and it will take away the anguish.

To stay the fluxe of vomiting take *Worme-wood*, and sowre bread toasted of each like quantitie, & beate them well in a mortar, then adde to them as much of the iuice of *mints*, and the iuice of *Plantane* as will bring it to a thicke salue: then fry them all together in a fryingpan, & when it is hot lay it plaister wise to the mouth of the stomacke, then let the party drinke a little white wine and *cheruile* water mixt together, and then steepe sower toasted bread in very strong Vinegar,

For griefes
in the stomacke.

For spitting
of blood.

For vomiting.

wrapt it in a fine cloath and let the sicke party smell thereto, and it will stay the excesse of vomiting, and both comfort & strengthen the stomacke.

To force one
to vomit.

If you would compell one to vomit, take halfe a spoonefull of *Stonecrop*, and mixe it with three spoonefull of white wine and giue it to the party to drinke, and it will make him vomit presently, but doe this seldome and to strong bodies, for otherwise it is dangerous.

For the *Ili-*
capassio.

For the *Iliacapassio*, take of *Polipody* an ounce, & stampe it, then boyle it with prunes and violets in *fennell water* or *Aniseed water*, take thereof a good quantatitie, then straine it and let the party euery morning and euening drinke a good draught thereof.

Additi-
ons,
to the dis-
eases of the
stomacke.

For the sto-
macke.

If the stomacke bee troubled with wind or other paine, take *Comyne* and beate it to poudre, and mixe with it red wine, and drinke it at night when you goe to bed, dyuers nights together.

For the *Ili-*
lica passio.

Take *Brokelyme* roots and leaues and was them cleane & drye them in the funne, so dry till you may make poudre thereof, then take of the poudre a good quantatitie, and the like of *Treacle*, and put them in a cup with a pretty quantatitie of strong old ale & stirre them well together, & drinke thereof first and last morning and euening for the space of three or foure dayes, and if need doe require, vie the same in thy brothes you do eate, for it is very soueraine.

For paine in
the brest.

Take *Harts-horne* or *Iuory* beaten to fine poudre, and as much *Cynamon* in poudre, mixe them with vinegar, & drinke thereof to the quantitie of seauen or eight spoonefulls.

For the
Mother.

Take the water of *Mauiscare*, and drinke thereof the quantitie of an ounce and a halfe or two ounces, twice or thrice a day, or otherwise take a little *Nutmegge*, a little *Cynamon*, a little *Cloues*, a little *Mace*, & a very little *Ginger*, & the flowers of *Lawendar*, beate all to a fine poudre, and when the passion

of

of the mother cometh, take a chaffingdish of good quicke coales, and bend the patient forward and cast of the powder into the chaffingdish, so as she may receiue the smoake both in at her nose and mouth, and if it is a present cure.

Against obstructions in the liuer, take *Anyseeds*, *Ames*, *Bur-net*, *Camomile*, and the greater *Centuaurie*, and boyle them in white wine with a little hony, and drinke it euery morning & it will cure the obstructions, and cleanse the liuer from all imperfection.

Obstructions of the liuer.

Against the heate and inflammation of the liuer, take *Endiue* dried to powder, and the meale of *Lupin seeds*, and mixe it with hony and the iuice of *Wormewood*, make a cake thereof and eate it, and it will asswage the great heate & inflammation of the liuer, and take away the pimples and rednesse of the face which proceedeth from the same.

Against the heate of the liuer.

To preuent a plurisie a good while before it come, there is no better way then to vse much the exercise of ringing, or to stretch your armes vpward, so as they may beare the waight of your body, & so to swing your body vp & downe a good space: but hauing caught a plurisie and feeling the gripes, fitches, and pangs thereof, you shall presently cause the party to be let blood, & then take the herb *Althea* or *Hollyhockes*, and boyle it with vinegar and *linseed* till it be thicke plaisterwise, and then spread it vpon a peece of *Allom* leather, and lay it to the side that is griued, and it will helpe it.

For the plurisie.

To helpe a stich in the side or else where, take *Doues dung*, red rose leaues and put them into a bagge, & quilt it: then thoroughly heate it vpon a chaffingdish of coales with vinegar in a platter: Then lay it to the pained place as hot as may bee suffered, & when it cooleth heate it againe.

A plaister for a stich.

For any extraordinary heate or inflammation in the liuer, take *Barbaries* & boyle them in clarified whay and drinke them and they will cure it.

Heate in the liuer.

For the conſump-
tion.

If you will make a cordiall for a Conſumption or any other weakeneſſe: take a quart of running water, a peece of *Mur-
tan*, and a peece of *Veale*, and put them with the water into a
pot, then take of *Sorrell*, *Violet leaues*, *Spynage*, *Endiue*, *Succory*
Sage, *Iſop*, of each a good quantitie; then take *Prunes* & *Ray-
ſons*, and put them all to the broth, and ſeeth them from a
quart to a pint, then ſtraine the yolke of an egge and a little
Saffron thereinto, putting in *Sugar*, whole *Mace*, and a little
white wine, ſo ſeeth them a while together, and let the party
drinke it as warme as may be.

To ſtanch
blood.

To ſtanch blood, take the hearbe *Shepheards-parſe* (if it may
be gotten) diſtilled at the Apotecaries, and drinke an ounce
thereof at a time Morning and Evening, and it will ſtay any
fluxe of blood naturall or vnnaturall, but if you cannot get
the diſtilled water, then boyle a handfull of the hearbe with
Cinamon, and a little *Sugar*, in *Claret wine*, and boyle it from
a quart to a pint, & drinke it as oft as you pleaſe: alſo if you
but rubbe the hearbe betweene your hands, you ſhall ſee it
will ſoone make the blood returne.

For the yell-
low Iau-
diſſe.

For the yellow Iau-diſſe, take two peniwoth of the beſt
English *Saffron*, drie it and grind it to an exceeding fine
pouder, then mixe it with the pap of a roſted apple, and giue
it the diſeaſed party to ſwallow downe in the manner of a
pill, and doe thus diuers mornings together, and without
doubt it is the moſt preſent cure that can be for the ſame, as
hath beene often times proued.

For the yell-
low Iau-
diſſe.

For the yellow Iau-diſſe take *pimpernell*, and *chickweeds*,
ſtampe them and ſtraine them into poſſetale, and let the par-
ty drinke thereof morning and evening.

For a deſpe-
rate yellow
Iau-diſſe.

For the yellow Iau-diſſe which is deſperat and almoſt paſt
cure: Take ſheepes dung new made & put it into a cup of
Beare or Ale, and cloſe the cuppe faſt and let it ſtand ſo all
night, and in the morning take a draught of the cleareſt of the
drinke

drinke, and giue it to the sicke party.

For the blacke laundisse take the hearbe called *Pemyryll*, & either boyle it in white wine, or drinke the iuice thereof simply by it selfe to the quantitie of three or foure spoonefull at a time, and it will cure the blacke laundisse.

Take of *Isop*, *Parseley*, & *Harts tongue*, of each a like quantitie, and seeth them in worte till they be soft, then let it stand till it be cold, and then drinke thereof first and last, morning and euening.

Take *Fenell roots*, and *Parseley roots*, of each a like, wash them cleane, and peel off the ouer barke and cast away the pyth within, then mynce them small, then put them to three pynts of water, and set them ouer the fire, then take *figges*, and shred them small, *Lycoras* and breake it small, and put them to the hearbs, and let all boyle vere well, then take *forrell* & stampe it and put it to the rest, and let it boyle till some part be wasted, then take a good quantitie of hony and put to it and boyle a while, then take it from the fire and clarifie it through a strayner into a glasse vessell and stop it very close, then giue the sick to drinke thereof morning and euening.

Take the stalke of of *Saint Mary Garbycke*, and burne it or lay it vpon a hot ryle stone vntill it be a very drye, and then beate it into pouder, and rub the sore therewith till it bee whole.

Take wooll in the walkmyll that commeth from the cloth and flyeth about like downe and beate it into pouder, then take thereof, the white of an egge and wheate flower, and stampe them together, then lay it on a linnen cloath or lynn & apply it to the bleeding place, and it will stanch it.

If a man bleed and haue no present helpe, if the wound be on the foote, bind him about the ankle, if in the legges bind him about the knee, if it be on the hand bind him about the wrist, if it be on the arme bind him about the brawne of the

For the
blacke iau
disse.

Additi
ons,

to the dis
eases of the
liuer. For
wasting of
the Liuer.

A restora
tine for the
liuer.

To heale a
ring worme
commiog of
beate from
the liuer.

To stanch
blod.

For great
danger in
bleeding.

arme, with a good lyft, two or three, and the blood will presently stanch.

For a stitch.

Take good store of *Cynamon* grated and put it into posset ale very hot and drinke it, and it is a present cure.

A bath for the dropfie.

Take a gallond of running water, and put to it as much salt as will make the water salt as the sea water, then boyle it a good while, and bath the legges therein as hot as may bee suffered.

For the dropfie.

For the dropfie, take *Agnus castus*, *Fenell*, *Affodill*, *darko wall woor*, *Lupins*, and *wormewood*, of each a handfull, and boyle them in a gallon of white wine till a fourth part bee columed: then straine it and drinke it morning and euening halfe a pinte thereof, and it will cure the dropfie; but you must be carefull that you take not *Daffodill*, for *Affodill*.

Paine in the spleene.

For paine in the spleene, take *Agnus Castus*, *Agrymony*, *Anyseeds*, *Centuary* the great, and *Wormewood*, of each a handfull, and boyle them in a gallon of white wine, then straine it and let the patient drinke diuers mornings together halfe a pinte thereof: and at his visuall meales let him neither drinke Ale, Beere, nor wine, but such as hath had the hearbe *Tamoriske* steeped in the same, or for want of the hearbe, let him drinke out of a cup made of *Tamoriske* wood, & he shall surely finde remedie.

For paine in the side.

For any paine in the side, take *Mugwort* and red *Sage*, and drie them betweene two tile stones, & then put it in a bagge, and lay it to your side as hot as can be indured.

For fatnesse and short breath.

To helpe him that is exceeding fat, purtie, and short breathed: take hony clarified, & bread vnleauened and make toasts of it, and dippe the toasts into the clarified hony, and eate this diuers times with your meate.

Additions,

to the diseases of the spleene, For the spleene.

Take a lumpe of yron or Steele, and heate it red hot, and quench it in Wine, then giue the Wine to the sicke party to drinke.

Take

Take *Fenell seeds* and the roots, boyle them in water, and after it is cleansed put to it hony & giue it the party to drinke, then seeth the hearbe in oyle and wine together, and plaister wile apply it to the side. *For the stop-
ping of the
spleene.*

Make a plaister of *worme-wood* boyled in oyle, or make an oyntment of the Iuice of *Worme-word*, of *Vinegar*, *armony-ake*, *waxe*, and *oyle*, myxt and melted together, and annoynt the side therewith, either in the sun, or before the fire. *For the
hardnesse of
the spleene.
Diseases of
the heart.*

Take the poudre of *Galingali*, and mixe it with the iuice of *Borage*, and let the offended party drinke therein sweete wine. *For the pasci-
on of the
Heart.*

Take *Rosemary* and *Sage*, of each an handfull, and seeth them in white wine or strong ale, and then let the patient drinke it luke warme. *For heart
sicknesse.*

Take the iuice of *Fenell* myxt with hony, and seeth them both together till it be hard, and then eate it Euening and Morning, and it will consume away the fatnesse. *For fatnesse
about the
heart.*

For the wind *Collicke*, which is a disease both generall and cruell, there be a world of remedies, yet none more approved then this which I will repeate: you shall take *Nutmegs* sound and large, and diuide them equally into foure quarters: the first morning as soone as you rise eate a quarter thereof; the second morning eate two quarters, and the third eate three quarters, and the fourth morning eate a whole *Nutmegge*, and so hauing made your stomacke and tast familiar therewith, eate euery morning whilst the *Collicke* offendeth you a whole *Nutmegge* drie without any composition, and fast euer an howre at least after it, and you shall find a most vnspeakeable profit which will arise from the same. *For the
wind collicke*

For the wind *Collicke*, take a handfull of cleane wheate meale as it cometh from the mill, and two egges, and a little wine-vinegar, and a little *Aquavita*, and mingle them all together. *The wind
collicke.*

together colde and make a cake of it and bake it on a grid-iron with a soft fire, and turne it often and tend it with basting of *aguanilla* with a feather; then lay it somewhat higher then the paine is, rather then lower.

For the lask.

For the *Lask* or extreame scowring of the belly, take the seeds of the wood-rose, or bryar-rose, beate it to powder and mixe a dramme thereof with an ounce of the conserve of floes and eate it, and it will in short space bind and make the belly hard.

For the bloody fluxe.

For the bloody flux, take a quart of Red wine and boyle therein a handfull of *Shepheards-purse* till the hearb bee very soft: then straine it, and ad thereto a quarter of an ounce of *Cynamon*, and as much of dried *Tanners barke* taken from the ouze, and both beaten to fine powder, then giue the party halfe a pint thereof to drinke morning and euening, it being made very warme, and it will cure him.

To stay a laske.

To stay a sore laske, take *Plantane* water and *cinamon* finely beaten, and the flowers of *Pamgranats*, and boyle them well together, then take *Sugar*, and the yolke of an egge, & make a caudle of it, and giue it the griued party.

For the fluxe.

For the fluxe take a Stags pizzell dried and grated, and giue it in any drinke, either in beere, ale, or wine, and it is most so-ueraigne for any fluxe whatsoeuer.

For the worst fluxe.

To rule the worst bloody Flix that may be, take a quart of red-wine, and a spoonefull of *Commmin-seede*, boyle them together vntill halfe bee consumed, then take *knot-grasse* and *Sepheards purse*, and *plantane*, and stampe them seuerall, and then straine them & take of the iuice of each of them a good spooneful, and put the to the wine, and so seeth the againe a little: Then drinke it luke-warme, halfe ouer-night, and halfe the next morning, and if it fall out to be in winter, so that you cannot get the hearbes: then take the water of the distilled, of each three spoonefuls, and vse it as before.

For

For extreame costiueneſſe, or binding in the body, ſo as a man cannot auoid his excrements, take *Anniſeeds*, *Fennicrete*, *Linſeed*, and the powder of *Pyonie*: of each halfe an ounce, and boyle them in a quart of white wine, and drinke a good draught thereof, and it will make a man goe to the ſtoole orderly and at great eaſe.

For coſtine-
neſſe.

For wormes in the belly, either of child or man, take *Aloes* *cickatrine*, as much as halfe a hazell Nut, and wrappe it in the pappe of a roasted apple, and ſo let the offended party ſwallow it in manner of a pill faſſing in the morning, or elle mixe it with three or ſoure ſpoonefull of *Muskadine*, and ſo let the party drinke, it is a preſent cure: but if the child be either ſo young, or the man ſo weake with ſickneſſe that you dare not adminiſter any thing in wardly, then you ſhall diſſolue your *Aloes* in the oyle of *Sauine*, making it ſalue-like thicke, then plaſter wiſe ſpread it vpon ſheepes leather, and lay it vpon the nauill or mouth of the ſtomacke of the griued party, and it will giue him eaſe, ſo will alſo vnſet leekes chopt ſmall and fryde with ſweete butter, & then in a linnen bagge apply hot to the nauill of the griued party.

For wormes

Take a quart of red wine & put to it three yolkes of egges, and a penyworth of long pepper and graynes, and boyle it well and drinke it as hot as can bee ſuffered, or otherwiſe take an ounce of the inner bark of an oake, and a penyworth of long pepper, and boyle them in a pint and better of new milke, and drinke it hot firſt and laſt morning and euening.

Additi-

ons,
to the diſe-
eaſes of the
belly & guts
For the
greateſt laxa-

Take an egge and make a little hole in the top, and put out the white, then fill it vp againe with *Aquavita*, ſtirring the egge and *Aquavita* till it be hard, then let the party eate the egge and it will cure him, or otherwiſe take pint of red wine & nine yolkes of egges, and Twentie pepper cornes ſmall beatē, let them ſeeth til they be thick, then take it off & giue the ſicke to eate nine ſpoonefull morning & euening.

For the
bloody fluxe.

For an easie
laſke.

Take of *Rue* and *Beets* a like quantitie, bruite them & take the iuice, mixe it with clarified hony, and boyle it in redde wine, and drinke it warme firſt and laſt morning and euening.

To haue two
ſtooles a day
and no more.

Take *Mercury*, *Sinkefoyle*, and *Mallowes*, and when you make pottage or broth with other hearbs, let theſe hearbs before named haue moſt ſtrength in the pottage, and eating thereon it will giue you two ſtooles and no more.

For hardnes
of the belly
or wombe.

Take two ſpoonefull of the Iuyce of Iuyce leaues, and drinke it three times a day, and it will diſſolue the hardnes.

Against
coſtiuenesse.

Take the barkes of the roots of the elder tree and ſtampe it, and mixe it with old ale, and drinke thereof a good harty draught.

For the ſtop-
ping of the
wombe.

Take the crummes of white bread, and ſteepe it in allom milke and ad ſugar vnto it and eate it, and it will open the belly.

For the
wind collick.

Take the kynnelles of three *Pearch* ſtones, & bruiſe them, ſeauen cornes of caſe pepper, and of ſlyced ginger a greater quantitie then of the pepper, pound all together groſſly & put it into a ſpoonefull of *Sacke* (which is the beſt) or elſe white wine or ſtrong ale, and drinke it off in a great ſpoone, then faſt two houres after and walke vp & downe if you can, if otheſwife, keepe your ſelfe warme, and beware of melancholly. It may be taken at all times.

For the
Rapture.

Take of *Dafies*, *comfrey*, *Polpodi*, of the oake and auence of each halfe a handfull, two roots of *Oſmund*, boyle them in ſtrong Ale & hony, and drinke thereof morning, noone, & night, & it wil breake any reaſonable rapture. Or otherwiſe take of *Smallage*, *Comfrey* ſerwell, *polypody* that growes on the grownd like *fearne*, *dafie*, and *mores*, of each a like, ſtampe them very ſmall, and boyle them well in *Barme*, vntill it bee thicke like a pultis, and ſo keepe it in a cloſſe veſſell, and when you haue occaſion to uſe it, make it as hot as the party can ſuffer it, and lay it to the place grieued, then with a trulle,
trulle

trusse him vp close, and let him be carefull for straying of himselfe, and in a few dayes it will knyt, during which euer giue him to drinke a draught of red wine, and put therein a good quantitie of the flower of *fetches* finely boulded stry-ring it well together, and then fast an houre after.

For the violent paine of the stone, make a posset of milke and sacke, then take off the curd, and put a handfull of *Camomill* flowers into the drinke, then put it into a pewter pot and let it stand vpon hot imbers, so that it may dissolue: and then drinke it as occasion shall serue: Other for this grieve take the stone of an Oxe gall, & drie it in an ouen, then beate it to poudre, and take of it the quantitie of a hassill nut with a draught of good old ale or white wine.

For the
stone.

Another.

For the Collicke and stone, take hawthorne berries, the berries of sweet briars, and ashen keyes, and dry them euery one seuerally vntill you make them into poudre, then put a little quantity of euery one of them together, then if you thinke good put to it the poudre of *Licoras* and *aniseeds*, to the intent that the party may the better take it, then put in a quantity of this poudre in a draught of white wine, & drinke it fasting. Otherwise you may take *Smallage seede*, *Parsley*, *Louage*, *Saxifrage*, & *broome-seede*, of each one of them a little quantitie, beate them into a poudre, and when you feele a fit of either of the diseases, eate of this poudre a spoonfull at a time either in portage, or else in the broth of a chicken, and so fast two or three howers after.

The collicke
and stone.

Another.

To make a poudre for the collicke and stone, take *fenell*, *parsley seede*, *anyseed*, and *carraway seed*, of each the waight of sixe pence, of *gromel seede*, *saxifrage seede*, the roots of *Filipendula*, and *licoras*, of each the waight of twelue pence, of *gallingall*, *spikenard*, and *Cinamon*, of each the waight of eight pence, of *Seena* the waight of xvi. shillings, good waight, beate them all to poudre and searce it, which will waigh in all

A powder
for the col-
licke and
stone.

all 2s. shillings and 6. pence: This powder is to bee giuen in white wine and sugar in the morning fasting, and so to continue fasting two howers after; and to take of it at one time the waite of ten pence or twelue pence. Other Physicians for the stone take a quart of renish or white wine, and two lymons, and pare the vpper rinde thinne, & slice them into the wine, and as much white soape as the waight of a groate, and boyle them to a pint, and put thereto sugar according to your discretion: and so drinke it keeping your selfe warme in your bed, and lying vpon your backe.

Another.

*For the
stone in the
reynes.*

For the stone in the reynes, take *Ameos*, *Camomill*, *Maidenhair*, *Sparrow-tounge*, and *Filapendula*, of each a like quantity, drie it in an ouen, and then beate it to powder, and euery Morning drinke halfe a sponesfull thereof with a good draught of white wine, and it will helpe.

*For the
stone in the
bladder.*

For the stone in the bladder, take a Radish roote and slit it crosse twice, then put it into a pint of white wine, and stoppe the vessell exceeding close; then let it stand all one night, and the next morning drinke it off fasting, & thus do diuers mornings together, and it will helpe.

*A powder
for the stone
in the bladder.*

For the stone in the bladder take the kernels of sloes & drie them on a tile stone, then beate them to powder, then take the roots of *Alexanders*, *parfly*, *pellitorie*, & *holihocke*, of euery of their roots a like quantitie, & seeth them all in white wine, or else in the broth of a yong chicken: then straine them into a cleane vessell, & when you drinke of it, put into it halfe a spoonefull of the powder of flow kernels. Also if you take the oyle of Scorpion, it is very good to annoynt the members, & the tender part of the belly against the bladder.

*A bath for
the stone.*

To make a bath for the stone, take *mallowes*, *holihocke*, and *lilly roots*, & *linseed*, *pellitory of the wall*, and seeth them in the broth of a sheepes head, and bath the reines of the backe therewith oftentimes, for it will open the straitnes of the

the water conduits, that the stone may haue issue, and as-
swage the paine, and bring out the grauell with the vrine;
but yet in more effect, when a plaister is made and laid vnto
the reines and belly immediately after the bathing.

To make a water for the stone, take a gallon of new milke
of a red Cow, and put therein a handfull of *Pellitory* of the
wall, and a handfull of wild time, and a handfull of *Saxifrage*
and a handfull of *parsly*, and two or three radish roots sliced
and a quantitie of *Philipendula* roots, let them lie in the milke
a night, and in the morning put the milke with the herbs
into a still, & distill them with a moderate fire of charr cole or
such like; then when you are to vse the water, take a draught
of renish wine or whit wine, and put into it five spoonfull of
the distilled water, and a little *sugar* and *nutmeg* sliced, & then
drinke of it, the next day meddle not with it, but the third
day do as you did the first day, and so euery other day for a
weekes space.

*A water for
the stone.*

For the difficulty of vrine, or hardnesse to make water, take
Smallage, *Dill*, *Any feedes* and *Burnet*, of each a like quantitie,
and drie them and beate them to fine pouder, and drinke halfe
a spoonefull thereof with a good draught of white wine.

*Difficulty
of Vrine.*

If the Vrine be hot and burning, the party shall vse euery
morning to drinke a good draught of new milke and sugar
well mixt together, and by all meanes to abstaine from beere
that is old, hard, and tart, and from all meates and sawces
which are sower or sharpe.

*For hot
vrine.*

For the strangullion, take *Saxifrage*, *Polipady*, of the Oake,
the roots of beanes, and a quantitie of *Raysins*, of euery one
three handfull or more, and then two gallonds of good wine,
or else wine lees, and put it into a serpentry and make ther-
of a good quantitie, and giue the sick therof to drinke mor-
ning and euening a spoonefull at once.

*For the
strangullion.*

For them that cannot hold their water in the night time,
take

For piſſing
in bed.

take *Kiddes* hooſe and drie it and beete it into powder, and giue it to the patient to drinke, either in beare or ale ſoure or ſweet times.

For the rup-
ture.

For the rupture or buſnelle in men, take *Comphrie* and *Perneofmand*, and beate them together with yellow waxe and Deares ſuet till it come to a ſalue, & then apply it to the broken place and it will knit it; alſo it ſhall be good for the party to take *Comphry* roots, and roſt them in hot imbers at you roſt wardenſ, and let the diſeaſed party eate them, for they are very ſoueraine for the rupture, eſpecially being eaten faſting, and by all meanes let him weare a ſtrong traſſe till he be whole.

Additi-
ons,

to the diſe-
aſes of the
Reynes and
Bladder.

For he that
cannot hold
his water.

For the Go-
norea or

ſhedding of
ſeede.

For weak-
nes in the
backe.

For beate in
the reynes.

For comfort-
ing and
ſtrengthening
of the backe.

Take *Goares* clawes & burne them in a new earthen pot to powder, then put of the powder into broth or potrage & eate therein, or otherwiſe take *Rew*, *Gromell*, and *Parſly*, and ſtampe them together & mixe it with wine and drinke it.

Take *Agnus caſtus*, and *Caſtoreum* and ſeeth them together in wine and drinke thereof, alſo ſeeth them in Vineger and hot lappe it about the priuie parts and it will helpe.

Take *Malmesey* and Butter, and warme it and waſh the reynes of the backe, whereupon you find paine, then take oyle of mace and annoynt the backe therewith.

Fiſt waſh the reynes of the backe with warme white wine, then annoynt all the backe with the oynment called

Perſuante.

Take a legge of beefe, a handfull of *Fenell* roots, a handfull of *parſly* roots, two roots of *camfrey*, one pound of *rayſons* of the ſun, a pound of damask *primas*, and a quarter of a pound of dates, put all theſe together and boyle them very ſoft with fixe leaues of *ſnip*, fixe leaues of *clary*, twelue leaues of *birch* of the wood, and a little *baris-rangue*, when they are ſod very ſoft, take them and ſtampe them very ſmall and and ſtampe them into the ſame broth againe with a quart of ſacke,

parry ease, so will also a plaister of *Oxierdium*, if it be continually warme vpon the same.

To helpe all manner of swellings or aches, in what part of the body soeuer it be, or the stinging of any venomous beast, as *Adder*, *Snake*, or such like, take *horehound*, *smallage*, *porreys*, *small mallowes*, and wild *ransey*, of each a like quantitie, and bruisse them or cut them small: Then seeth them altogether in a pan with milke, *oatemeale*, and as much *Sheepes suet*, or *Deares suet* as an hens egge, and let it boyle till it bee a thicke plaister, then lay it vpon a blew woollen cloath, and lay it to the grieve as hot as one can suffer it.

For any pain
or swelling,
or the stinging
of venomous
beasts.

For any swelling in the legges or feete, take a good handfull of water cresses and shread them small, and put them in an earthen pot, and put thereto thicke wine lees, and wheate branne, and *sheepes suet*, of each of them a like quantitie, and let them boyle together vntill they bee thicke, then take a linnen cloath bind it all about the sore and swelling as hot as the parry grieued can indure it, & let it remaine on a whole night, and a day without any removing, and when you take it away lay to it a fresh plaister, hot, as before, & it will take away both the paine & the swelling. Other Surgions for this grieve take hony and beere and heate them together, & therewith bath the swelling both morning and evening.

For swellings
in the legges
or feete.

To wash any sore or vicer, take running water & *Bole Armeniack* and *camphire*, and boyle them together, and dip in a cloth, and lay it to the sore as hot as it may be indured, also *plantane* water is good to kill the heate of any sore; or if you take *woodbine* leaues and bruisse them small, it will heale a sore; or if you wash a sore with verjuice, that hath beene burnt or scalded, it is a present remedy.

A water to
wash a sore
with.

Others for this grieve, take the greene of goose dunge & boyle it in fresh butter, then straine it and vse it. Also salter oyle and snow water bearen together, will cure any scald or burning.

A pulvis for
a sore.

burning.

For any old
ſore.

To cure any old ſore how grieuous ſoeuer it bee, take of new milke three quarts, a good handful of *plantane*, and let it boyle till a pint be conſumed: Then ad three ounces of *allom* made in powder, and one ounce and a halfe of white *Sugar* candy powdered. Alſo then let it boyle a little till it haue a hard curd, then ſtraine it with this warme the vicer, and all the member about it: then drie it, and lay vpon the vicer, *unguentum Baſilicon* ſpread on lint, and your *diminium* plaſter *diminio* ouer it: for this ſtrengtheneth and killeth the itch: but if you find this is not ſharpe enough, then take of milke a quart, *allom* in powder two ounces, vinegar a ſpooneful, whe the milke doth ſeeth, put in the *allom* & vinegar: then take off the curd, and vſe the reſt as was before ſaid, and it will cure it.

For ſcabs or
itch.

For ſcabs or itch take *unguentum populion*, and therewith annoynt the party and it will helpe, but if it be more ſtrong & ranke, take an ounce of *Neruoile* and three penyworth of quickſiluer, and beate and worke them together, till you ſee that aſſuredly the quickſiluer is kild, then let the party annoynt therewith the palmes of his hands, the boughs at his elbowes, his arme pits, & hammes, and it will cure all his body.

For the Lep-
roſie.

To cure the *Leproſie*, take the iuice of *colwarts*, and mixe it with *Allom* and ſtrong Ale, and annoynt the leaper therewith morning and evening, and it will cleaſe him wonderfully, eſpecially if he bee purged firſt, and haue ſome part of his corrupt blood taken away.

To take away
pimples.

To take away either pimples from the face, or any other part of the body, take Virgin waxe, and *Spermaceti*, of each a like quantitie, and boyle them together, and dip in a fine linnen cloth, and as it cooles dippe it well of both ſides, then lay it vpon another faire cloth vpon a Table, & then fold vp a cloth in your hands, and all to ſlight it with the cloth, then take

take as much as wil couer the grieved place.

If any man haue his priuy parts burnt, take the ashes of a fine linnen cloth in good quantity, and put it into the former oyle of egges, and annoynt the sore member therewith, and it will cure it.

*Prinie parts
burnt.*

For any burning, take sixe new laid egges and roast them very hard, and take out the yolkes thereof, and put them into an earthen pot, and set it ouer the fire on hot imbers, and then whilst the egges looke blacke, stirre them with a slice till they come to an oyle, which oyle take and clarifie & put into a glasse by it selfe, and therewith annoynt any burning, and it will cure it.

*For any
burning.*

For any scalding with hot water, oyle or other wise; take thicke creame, & set it on the fire, and put into it the greene which growes on a stone wall, take also yarrow, the greene of elder barke and fire graspe, and chop them small, then put them into the creame, and stirre it well till it come to an oyle saluē, then straine it and annoynt the sore with it.

*For any
scalding.*

To drie vp any sore, take *Smallage*, *Groundfill*, wilde *Mal-lowes*, and *violet leaues*: chop them small and boyle them in milke with bruised *Oatemeale* and sheepes suet, and so apply it to the sore.

*A pultisto
drie a sore.*

To eate away dead flesh, take *Stubble wort*, and folde it vp in a red docke leafe, or red wort leafe, and so roast it in the hot imbers and lay it hot to any sore, and it will fret away all the dead flesh; or otherwise, if you srew vpon the sore a lile precipitate it will eate away the dead flesh.

*To eate a-
way dead
flesh.*

To make a water to heale all manner of wounds, you shall take *Tuph-wort* flowers, leaues and roots, & in *March* or *Aprill* when the flowers are at the best, distill it, then with that water bath the wound, and lay a linnen cloth well therewith in the wound, and it will heale it.

*A water to
heale wounds.*

To heale any wound or cut in any flesh or part of the bo-

by:

To heale any
wound.

dy: First if it bee fit to bee stiched, itch it vp, and then take *Vnguentum aurum*, and lay it vpon a pleagant of lint as bigge as the wound, and then ouer it lay a *diminio* plaister made of Sallet oyle and white leade, and so dresse it at least once in fowre and twenty houres, but if it be a hollow wound, as some thrust in the body or other members, then you shall take *Balsamum cephalicum*, and warming it on a Chafing dish and coales, dip the tent therein, and so put it into the wound, then lay your plaister *diminio* ouer it, & do thus at least once a day till it be whole.

For sinewes
cut or
shrunke.

If a mans sinewes be cut or shrunke, hee shall goe to the root of the wild *neepe* which is like woodbine, and make a hole in the midst of the root, then couer it well againe that no ayre goe out nor in, nor raine nor other moysture; Thus let it abide a day and a night, then goe and open it, and you shall find therein a certaine liquor: then take out the liquor and put it into a cleane glasse, and doe thus euery day whilst you find any moysture in the hole; And this must onely bee done in the months of *Aprill* and *May*: Then annoynt the sore therewith against the fire, then wet a linnen cloth in the same liquor, and lap it about the sore, and the vertue will soone be perceiued.

To breake
any impos-
tume.

To breake any Impostume, and to ripe it onely, take the greene *Melilot* plaister, and lay it thereunto, and it is sufficient.

Additi-
ons,

to generall
infirmities
of Surgery
and first of
burnings &
scaldings.

For burning

Take *Plantane* water, or *Sallet oyle* and running water beaten together, and therewith annoynt the sore with a feather till the fire be taken out, then take the white of eggs and beate them to oyle, which done take a hare skynne and & clyppe the hayre into the oyle & make it as thicke as you may spread it vpon a fine linnen cloth, and so lay it vpon the sore and remoue it no, vntill it be whole, and if any rise vp of it selfe, clippe it away with your sheares, and if it be not perfectly

fectly whole, then take a little of the oyntment and lay it to the same place againe, or therwise take halfe a bushell of glouers threads of all sorts, & so much of running water as shall be thought conuenient to seeth them, and put thereto a quarter of a pound of Barrowes grease, and then take halfe a bushell of the downe of cats tayles and boyle them all together, continually stirring them, till they bee sodden that they may be strayned into an earthen pot or glasse, and with it annoynt the sore. Or else take of *Caprefolij*, *Mousecare* ground, *Iuye* and *hens dung* of the reddest or of the yellowest, and fry them with may butter altogether vntill it be browne, then strayne it through a cleane cloth, and annoynt the sore therewith.

or scalding
with either
liquor or
gunpowder.

Take the middle rind of the Elmetree, and lay it two or three houres in faire running water till it waxe ropye like glew, and then annoynt the sore therewith: Or otherwise, take sheeps tallow and sheeps dung and mixe them together till they come to a salue, and then apply it to the sore.

For burn-
ings or scald-
ings on the
face.

Take *Plantane* leaues, *Dasil* leaues, the greene bark of elders, and greene *Germaunders dyrt*, flampe them all together with fresh butter or with oyle, then strayne it through a linnen cloth, and with a feather annoynt the sore till it be whole.

Anoyntment
for burning.

Take of *Oyle olyue* a pint, *Terpentyne* a pound, vnwrought waxe halfe a pound, *Rosen* a quarter of a pound, sheeps suet two pound, then take of *orpens*, *Smailage*, *Ragwort*, *Plantane*, and *sickell-wort*, of each a good handfull, chop all the hearbs very small, and boyle them in a pan altogether vpon a soake-ing fire, and stirry them exceeding much till they bee well incorporate together, then take it from the fire and strayne al through a strong canuasse cloth into cleane potts or glasses and vse it as occasion shall serue, eyther to annoynt, rent, or plaister. Otherwise take *poplar buds*, and *elder buds*,

Ulcers and
Sores.

A salue for
any old sore.

stampe and straine them, then put thereto a little venyee turpentine, waxe and rosin, and so boyle them together and therewith dresse the sore, or else take two handfull of plantane leaues, bray them small, and strayne out the iuyce, then put to it as much womans milke, a spoonefull of hony, a yolke of an egge, and as much wheate flower as you thinke will bring it to a salve, then make a plaister thereof and lay it vnto the sore, renewing it once in foure and twenty houres.

To take away dead flesh.

Take an ounce of *Vnguentum apostolorum*, and an ounce of *Vnguentum Aegyptiacum*, and put them together in a pott being first well wrought together in a bladder, and if the flesh be weake, put to it a little fine white sugar, and therewith dresse the sore, or otherwise take onely *Precipitate* in fine powder, and strew it on the sore.

A water for a sore.

Take a gallon of Smithes fleacke water, two handfulls of sage, a pint of hony, a quart of ale, two ounces of Allom, and a littell white *copperas*, seeth them all together till halfe be consumed, then strayne it, and put it into a cleane vessell, and therewith wash the sore. Or otherwise take cleane running water and put therein roch allom and madder, and let them boyle till the allom and the madder be consumed, then take the clearest of the water and therewith wash the sore. Or else take Sage, Fenell, & sinquefoyle, of each a good handfull, boyle them in a gallond of running water till they be tender, then strayne the liquor from the hearbs, and put to it a quarter of a pound of roch allom, and let it seeth againe a little till the allom be melted, then take it from the fire and vse it, thus, dip lint in it warme and lay it to the sore, and if it be hollow apply more lynx, then make a little bolster of linnen cloth, and wet it well in the water, then wring out the water, and so bind on the bolster close.

A blacke plaister to heale old sores and kill inflammation.

Take a pint of sallet oyle and put into it sixe ounces of red lead, and a little ceruse or white lead, then set it ouer a gentle

the fire, and let it boyle a long season stirring it well till it bee stiffe, which you shall trie in this order; let it drop from your sticke or slice vpon the bottome of a saucer, and so stand vntill it be cold, and then if it be well boyled, it will be stiffe & very blacke, then take it off and let it stand a little, and after straine it through a cloth into a bason, but first annoynt the bason with faller oyle, and also your fingers, and so make it vp into roules plaisterwise, and spread it and apply it as occasion shall serue.

Take *Mallows* and *Beets*, and seeth them in water, then drie away the water from them, and beate the hearbs well with old Boares grease, and so apply it to the appostume hott.

Take a handfull of *Rue* and stampe it with rustie Bacon till it come to a perfect salve, and therewith dresse the sore till it be whole.

If the party be outwardly venomed, take *Sage* and bruisse it well & apply it to the sore, renewing it at least twice a day, but if it be inwardly, then let the party drink the iuice of *Sage* either in wine or ale morning and euening.

Take *Sellodyne* early in the morning, and bruisse it well, & then apply it to the sore, and renewing it twice or thrice a day.

Take of *Camphere* one dramme, of *quicksiluer*, four peny-worth killed well with vinegar, then mixe it with two peny-worth of oylede bay, and therewith annoynt the body. Or otherwise take red *Onyons* and seeth them in running water a good while, then bruisse the *Onyons* small, and with the water they were sodden in, strayne them in, then wash the infected place with the same.

Take a greate quantitie of the hearbe *Bonnet*, and as much of red nettles, pound them well & strayne them, and with the iuice wash the paryent naked before the fire, and so let it

*An oyntment to ris
pensores.*

*For the
stinging of
any adder or
venomous
thing.*

*For any
venomous.*

*For a ring-
worme.*

For the itch.

*For the drye
ed Scabbe.*

drinke in and waſh him againe, and doe ſo diuers dayes till he be whole.

To kill the
Itch or tet-
ter ſerpego.

Take a penyworth of white copperas, and as much greene copperas, a quarter of an ounce of white Mercury, a halpenyworth of *Allom* & burne it, and ſet al ouer the fire with a pint of ſayre water, and a quarter of a pint of wine vinegar, boyle all theſe together till they come to halfe a pint, and then annoynt the ſore therewith.

To take a-
way the arrs
of the ſmall
Poxe.

Take *Barrowes* greaſe a prettie quantitie, and take an apple and pare it and take the chore cleane out, then chop your apple and your *Barrowes* greaſe together, and ſet it ouer the fire that it may melt but not boyle, then take it from the fire, and put thereto a pretty quantitie of roſe water and ſtirr all together till it be cold, and keepe it in a cleane veſſell, and then annoynt the face therewith.

For the
French or
Spaniſh pox.

Take quickſiluer and kill it with faſting ſpittle, then take *Verdigreaſe*, *Arabicke*, *Turpentime*, *Oyle olyue*, and *Populion*, & mixe them together to one entyre oyntment, and annoynt the ſores therewith, and keepe the party exceeding warme. Or otherwiſe, take of *Allom* burned, of *Roffin*, *Frankenſence*, *Populion*, *Oyle of Roſes*, *Oyle de bay*, *Oyle olyue*, greene *Copperas*, *Verdigreaſe*, *White lead*, *Mercury ſublymde*: of each a prettie quantitie but of *Allom* moſt, then beate to powder the ſymples that are hard, and melt your oyles, and caſt in your powders and ſtirre all well together, then ſtraime them through a cloth, and apply it warme to the ſores; or elſe take of *Capans* greaſe that hath toucht no water, the iuyce of *Rue* and the fine powder of *Pepper*, and mixe them together to an oyntment, and apply it round about the ſores, but let it not come into the ſores, and it will drie them vp.

To put out
the French
or Spaniſh
Poxe.

Take of *Treakle* halfe a pennyworth, of long *Pepper* as much, and of *graynes* as much, a littell *ginger*, and a little quantitie of *Licoras*, warme them with ſtrong ale, and let the

the party drinke it off, and lie downe in his bed and take a good sweate: and then when the sores arise, vse some of the oyntment before rehearsed.

Take the iuice of red *Fennell*, and the iuyce of *Sen Greene* and stone hony, and mixe them very well together till it bee thicke, and with it annoynt the party, but before you doe annoynt him you shall make this water. Take *Sage* and seeth it in very faire water from a gallond to a pottell, & put therein a quantitie of hony and some allom, and let them boyle a little together; when you haue strayned the hearbs from the water, then put in your hony and your allom, and therewith wash the poxe first, and let it drie in well, and then lay on the aforesaid oyntment.

To make the
scabs of the
French poxe
to fall away.

Additi-
ons,
to greene
wounds.
A deffensis
tine for a
greene
wound.

Take the oyle of the white of an egge, wheate flower, a littell hony and venice *Turpentine*, take and stirre all these together, and so vse it about the wound but not within, and if the wound do bleed, then adde to this salve a little quantity of *Bolarmonyake*.

Take *Apponaxe* and *Galbanum*, of each an ounce, *Amomianum*, and *Bellynd* of each two ounces, of *Lethargie* of gold one pound and a halfe, new waxe halfe a pound, *Lapis Calamniaris* one ounce, *Turpentine* foure ounces, *Myrhe* two ounces, *Oyle de bay* one ounce, *Thusse* one ounce, *Arystolochia* roots two ounces, oyle of *Roses* two ounces, *faller oyle* two pound, all the hard tymples must bee beaten to fine powder and searssed, take also three pynts of right wine vinegar, & put your foure gummes into the vinegar a whole day before till the gummes be dissolued, then set it ouer the fire and let it boyle very softly till your vinegar be as good as boyled away, then take an earthen por with a wide mouth and put your oyle in and your waxe, but your waxe must be scraped before you put it in, then by a littell at once put in your *Lethargie* and stirre it exceedingly, then put in all your
gummes

A salve for
a greene
wound.

gummes and all the rest, but let your *Turpentine* be last, and so let it boyle till you see it grow to be thicke, then poure it into a bason of water and worke it with oyle of *Roses* for sticking to your hands, and make it vp in roules plaister wise, and here is to be noted, that your oyle of *Roses* must not be boyled with the rest, but after it is taken from the fire a littell before the *Turpentine*.

A water to
heale any
greene
wound, cut,
or sore.

Take three good handfull of *Sage*, and as much of *Hony-suckell* leaues and the flowers cleane picked, then take one pound of roch *Allom*, & a quarter of a pound of right english hony clarified cleane, halfe a penyworth of graynes, and two gallonds of running water, then put all the said things into the water, and let them seeth till halfe be consumed, then take it from the fire till it be almost cold & strayne it through a cleane cloth, & put it vp in a glasse, and then either on tent or pleagant vse as you haue occasion.

To stanch
blood and
draw sinewes
together.

Take a quart of rye flower and temper it with running water, and make dough thereof, then according to the bignesse of the wound lay it in with the *deffensyue* plaister before rehearsed ouer it, and euery dressing make it lesse and lesse till the wound be closed.

A mayden
oyle for
shrinking of
sinewes.

Take a quart of neates foot oyle, a quart of oxe galles, a quart of *Aquavita*, and a quart of rose water, a handfull of rosemary frypt, and boyle all these together till halfe be consumed, then presse and strayne it, and vse it according as you find occasion.

For a wound
in the gutts.

Take hony, pitch and butter, and seeth them together, & annoynt the hurt against the fire, and tent the sore with the same.

For pricking
with a
thorne.
To gather
flesh in
wounds,

Take groundsell and stampe it, and seeth it with sweete mylke till it be thicke, then temper it with blacke sope and lay it to the sore.

Take Rosin a quarter of a pound, of waxe three ounces,
of

of oyle of Roses one ounce and a halfe, seeth all them together in a pint of white wine till it come to skymming, then take it from the fire & put thereto two ounces of venice *turpentine*, and apply it to the wound or sore.

Take mustard made with strong vinegar, the crūmes of browne bread, with a quantitie of hony and fixe figgs minxt, temper all together well and lay it vpon a cloath plaisterwise, put a thinne cloath betweene the plaister and the flesh & lay it to the place greued as oft as need requires.

Take a pound of fine Rozin, of oyle de bay two ounces, of *Populion* as much, of *Frankensence* halfe a pound, of oyle of *Spyke* two ounces, of oyle of *Camomile* two ounces, of oyle of *Roses* two ounces, of *Waxe* half a pound, of *Turpentine* a quarter of a pound, melt them and stirre them well together and then dip linnen clothes therein, and apply the searecloth as you shall haue occasion, and note the more oyle you vse, the more supler the searecloth is, and the lesse oyle the stiffer it will be.

Take a little blacke sope, fault and hony, and beate them well together, and spread it on a browne paper and apply it to the bruise.

Take *Mallows* and seeth them in the dregges of good Ale or milke, and make a plaister thereof, and apply it to the place swelled.

Take in the moneth of *May*, *henbane* and bruise it well and put it into an earthen pot and put thereto a pint of sallet oyle and set it in the sunne till it be all one substance, then annoynt the ach therewith.

Take halfe a pound of vnwrought wax, as much Rozin, one ounce of *galbanum*, a quarter of a pound of *Lethargie* of gold, 3. quarters of white *Leade*, beaten to pouded and ceast, then take a pint of neates foote oyle and set it on the fire in a small vessel which may containe the rest, and when it is all moul-

Additi-

ons,

for ach or
swellings.For the
Cyntyca.A yellow
searcloth for
any payne or
swelling.For bruises
swelled.For swelled
legges.For any
acheA plaister
for any paine
or ache in
the ioyns.

Additi-
ons,*to griefe in
the Bones.**For bones
out of loynt
or ſinnewes
ſprung or
ſtrained.*

ten, then put in the pouders and ſtirre it faſt with a ſlice, and trie it vpon the bottome of a ſaucer, when it beginneth to be ſomewhat hard, then take it from the fire, & annoynt a ſayre boord with neates foot oyle, & as you may handle it for heate, worke it vp in roubles, and it will keepe ſiue or ſixe yeares, being wrapped vp cloſe in papers, & when you will vie it, ſpread of it thin vpon new lockram or leather ſomewhat bigger then the griefe, and ſo if the griefe remoue follow it, renewing it morning and euening, and let it bee ſomewhat warme when it is layd on, and beware of taking cold, & drinking hot wines.

Take foure or ſiue yolkes of egges, hard ſodden or roſted, & take the branches of great *Morrell*, and the berryes in *Somer*, and in winter the roots, and bray all well together in a mortar with ſheeps milke, and then fry it till it be very thicke and ſo make a plaifter thereof, and lay it about the ſore and it will take away both paine and ſwelling.

*A bath for
broken bones*

Take a gallond of ſtanding lye, put to it of *Plantane* and *knor-graſſe*, of each two handfull, of *worme-wood* & *Comfry*, of each a handfull, & boyle all theſe together in the lye a good while, and when it is luke warme bath the broken member therewith, & take the budds of elder gathered in *March*, and ſtryped downeward and a little boyle them in water, then eate them in oyle and very little vinegar, a good quantitie at a time in the morning euer before meate or an houre before the patient goe to dinner, and it much auayle to the knytting of bones.

*A generall
bath for
clearing the
ſkin and
comforting
the body.*

Take *Rofemary*, *Featherfewe*, *Organye*, *Pelitory* of the wall, *Fennill*, *Mallows*, *Violet* leaues, and *Nertells*, boyle all theſe together, and when it is well ſodden put to it two or three gallonds of milke, then let the party ſtand or ſit in it an houre or two, the bath reaching vp to the ſtomacke, and when they come out they muſt goe to bed and ſweate, beware taking of cold.

Make

Make a plaister of wheate flower and the whits of egges, & spread it on a double linnen cloth, then lay the plaister on an euen board, and lay the broken lymbe thereon, and set it euen according to nature and lap the plaister about it and splynt it, and giue him to drinke *Knyf-wort* the iuice thereof twice and no more, for the third time it will vnknit, but giue him to drinke nine dayes each day twice the iuyce of *Comfery*, *Day-sies* and *Osmund* in stale ale and it shall knit it, and let the fore-said plaister lye to ten dayes at the least, and when you take it away doe thus, take *hore-hound*, *Red fenell*, *Houns*, *tongue*, *wall-wort*, and *Pelitory*, and seeth them, then vnroule the member and take away the splynts, and then bath the linnen & the plaister about the member in this bath till it haue soakt so long that it come gently away of it selfe, then take the afore-said plaister and lay thereto fise or sixe dayes very hot, and let each plaister lie a day and a night & alwaies splynt it well, and after cherish it with the oyntments before rehearsed for broken bones, and keepe the party from vnholosome meates and drinckes till hee bee whole, and if the hurt be on his arme let him beare a ball of greene hearbs in his hand to preuent the shrinking of the hand and sinewes.

*A foweraine
helpe for
broken bones*

Take *Sage*, *Rag-wort*, *Tarrow*, vnset leekes of each a like quantitie, stampe them with bay salt and apply them to the wrists of the hands.

*For any
Fener.*

Blanch Almonds in the cold water, and make milke of them (but it must not seeth) then put to it sugar, and in the extremitie of heate, see you drinke thereof.

*To expell
heate in a
Fener.*

Take three spoonefull of Ale and a little *Saffron*, and bruse and straine it thereto, then adde a quarter of a spoonefull of fine *Treakle* and mixt together, and drinke it when the fitt comes.

*The royall
medicine for
Feners.*

Take two roots of erowe foot that growes in a marsh grownd, which haue no little roots about them, to the num-

Another.

ber of twentie or more, and a little of the earth that is about them, and doe not waſh them, and adde a little quantitie of ſalt, and mixe all well together and lay in one linnen clothes and bind it about your thumbes betwixt the fiſt and the neather ioynt, and let it lye nine dayes vnremoued, and it will expell the feuer.

*An approued medicine for the greateſt
Laſke or Flixe.*

Take a right *Pomewater* the greateſt you can get, or elſe two little ones, roaſt them very tender to pap, then take away the ſkinne and the core and uſe onely the pap, and the like quantitie of *Chalke* finely ſcraped, mixe them both together vpon a trencher before the fire, and worke them well to a plaſter, then ſpread it vpon a linnen cloth warmed very hot as may be ſuffred, and ſo bind it to the nauill for 24. houres, uſe this medicine twice or thrice or more till the laſke be ſtayed.

OF
*Oyle of
Swallowes.*

To make the oyle of Swallowes, take *Laueदार cotton*, *Spike*, *Knot-graſſe*, *Ribwort*, *Balme*, *Valerian*, *Rofemarie tops*, *Woodbine tops*, *Vine ſtrings*, *French Mallowes*, the tops of *Alecoſt*, *Strawberry ſtrings*, *Tuſſan*, *Plantane*, *Wale-nut tree leaue*, the tops of young *Baies*, *Iſop*, *Violet leaues*, *Sage of vertue*, fine roman *Worme-wood*, of each of them a handfull, *Camomile* and *Redroſes*, of each two handfull, iwentie quicke *Swallowes*, & beate them al together in a great mortar, & put to the a quart of *Neats-foote oyle*, or may butter, and grind them all well together with two ounces of cloues well beaten, then put them all together in an earthen pot, and ſtop it very cloſe that no ayer come into it, and ſet it nine dayes in a ſeller or cold place, then open your pot and put into it halfe a pound of white or yellow waxe cut very ſmall, and a pint of oyle or butter, then ſet your pot cloſe ſtopped into a panne of water, & let it boyle ſixe

sixe or eight houres, and then straine it: This oyle is exceeding soueraine for any broken bones, bones out of ioynt, or any paine or griefe either in the bones or sinnewes.

To make oyle of *Camomile*, take a quart of Sallet oyle and put it into a glasse, then take a handfull of *Camomile* and bruisse it, and put it into the oyle, and let them stand in the same 12. dayes, onely you must shift it euery three dayes, that is to strayne it from the old *Camomile*, and put in as much of new, and that oyle is very soueraine for any griefe proceeding from cold causes.

To make oyle
of cammo-
mile.

To make oyle of *Lauender*, take a pint of Sallet oyle and put it into a glasse, then put to it a handfull of *Lauender*, and let it stand in the same twelue dayes, and vse it in all respects as you did your oyle of *Camomile*.

To make
oyle of *Lauender*.

To make an oyle which shall make the skinne of the hands very smooth, take *Almonds* and beate them to oyle, then take whole *Cloues* and put them both together into a glasse, and let it in the sunne drie or sixe dayes, then strayne it, and with the same annoynt your hands euery night when you goe to bed, and otherwise as you haue conuenient leasure.

To make
smooth bāds

To make that soueraine water which was first inuented by Doctor *Steuens*, in the same forme as he deliuered the Receite to the Arch-bishop of *Canturbury*, a little before the death of the said Doctor. Take a gallon of good *Gascoyne wine*, then take *Ginger*, *Galingale*, *Synamon*, *Nutmegges*, *Graines*, *Cloues* brused, *Pennell seeds*, *Carrawaie seeds*, *Origanum*; of euery of them a like quantitie, that is to say a dramme: Then take *Sage*, *wild Margerom*, *Peny-royall*, *Mints*, *Red-roses*, *Time*, *Pellitory*, *Rosemary*, *wild-time*, *Cammomill*, *Lauender*, of each of them a handfull, then bray the spices small, and bruisse the hearbs and put al into the wine, & let it stand so twelue houres, only stirre it diuers times, then distill it by a *Lymbecke*, and keepe the first water by it selfe for that is the best, then keepe the second

To make
Doctor
Steuens water.

water for that is good, and for the laſt neglect it not, for it is very wholeſome though the worſt of the three. Now for the vertue of this water it is this, it comforteth the ſpirits and vitall parts, and helpeth all inward diſeaſes that commeth of cold, it is good againſt the ſhaking of the palfie, & cureth the contraction of linnewes, and helpeth the conception of women that be barraine, it killeth the wormes in the body, it cureth the cold cough, it helpeth the tooth-ache, it comforteth the ſtomacke, and cureth the old dropſie, it helpeth the ſtone in bladder and in the reines, it helpeth a ſinking breath: And whoſoeuer uſeth this water moderately and not too often, preſerueth him in good liking, & will make him ſeeme young in old age. With this water Docter *SIEMENS* preſerued his owne life vntill ſuch extreame age, that he could neither goe nor ride, and he continued his life being bed-rid ſiue yeares, when other Phyſicians did iudge he could not liue one yeare, which he did confeſſe a little before his death; ſaying: that if he were ſicke at any time, he neuer vſed any thing but this water only; And alſo the Archbiſhop of *Canterbury* vſed it, and found ſuch goodneſſe in it that hee liued till he was not able to drinke of a cup, but ſucked his drinke through a hollow pipe of ſiluer. This water will be much the better if it be ſet in the Sunne all Summer.

*A reſtor-
ation of Roſ-
ſaſolis.*

To make a cordiall *Rosaſolis*, take *Rosaſolis*, and in any wiſe touch not the leaues thereof in the gathering, nor waſh it; take thereof ſoure good handfuls, then take two good pints of *Aquavita*, and put them both in a glaſſe or pewter pot of three or ſoure pints, and then ſtop the ſame hard and iuſt, and ſo let it hand three dayes and three nights, and the third day ſtraine it through a cleane cloth into another glaſſe or pewter pot, and put thereto halfe a pound of *Sugar* beaten ſmall, ſowre ounces of fine *Licoras* beaten into powder, halfe a pound

pound of Ionud Dates the stones being taken out, & cut them and make them cleane, and then mince them small, and mixe all these together and stop the glasse or pot close and iust, and drinke of it at night to bedward halfe a spoonefull with Ale or Beere, but Ale is the better, as much in the morning fasting for there is not the weakeft body in the world that wanteth nature or strength, or that is in a consumption, but it will restore him againe, and cause him to be strong and lustie, and to haue a maruailous hungrie stomacke, provided alwaies that this *Rosa solis* be gathered (as neare as you possibly can) at the full of the moone when the sunne shineth before noone, and let the roots of them be cut away.

Take the flowers of roses or violets & break them small and put them into sallet oyle, and let them stand in the same ten or twelue dayes, and then presse it. Or otherwise take a quart of oyle *Olyue*, and put thereto Sixe spoonefuls of cleane water, and stirre it well with a slice, till it waxe as white as milke, then take two pound of red rose leaues and cut the white of the ends of the leaues away, and put the roses into the oyle, & then put it into a double glasse and set it in the sun all the summer time, and it is foueraigne for any scalding or burning with water or oyle. Or else take red roses new plucked a pound or two, and cut the white ends of the leaues away, then take may Butter and melt it ouer the fire with 2. pound of oyle *olyue*, & when it is clarified put in your roses and put it all in a vessell of glasse or of earthen, and stop it well about that no ayre enter in nor out, and set it in another vessell with water and let it boyle halfe a day or more, and then take it forth and straine or presse it through a cloth, and put it into glasse bottells, this is good for al manner of vnkind heates.

Take two or three pound of *Nutmegges* & cut them small and bruse them well, then put them into a pan and beate them and stirre them about, which done, put them into a canuasse

Additi-
ons,
to the Oyles.
To make
oyle of Roses
or Violets.

To make
oyle of Nut-
meggs.

or

or strong linnen bagge, and close them in a presse and presse them, & get out all the liquor of them which will be like manna, then scrape it from the canuasse bagge as much as you can with a knife, then put it into some vessell of glasse and stoppe it well, but set it not in the sun for it will waxe cleane of it selfe within 10. or 15. dayes, and it is worth thrice so much as the Nutmeggs themselues, and the oyle hath very great vertue in comforting the stomacke and inward parts, and asswaging the paine of the Mother and Cyatica.

To make
perfect oyle of
Spyke.

Take the flowers of *Spyke*, and wash them only in *Oyle olyue* and then stampe them well, then put them in a canuasse bagge & presse them in a presse as hard as you can, & take that which commeth out carefully, and put it into a strong vessell of glasse, and set it not in the sun for it will cleare of it selfe & waxe fayre and bright, and will haue a very sharpe odor of the *Spyke*; and thus you may make oyle of other hearbs of like nature, as *Laurender*, *Camomile*, and such like.

To make
oyle of
Masticke.

Take an ounce of *Masticke*, and an ounce of *Olibanum* pounded as small as is possible, & boyle them in oyle *Olyue* (a quart) to a third part, then presse it and put it into a glasse, & after 10. or 12. dayes it will be perfect: it is exceeding good for any cold grieve.

Thus hauing in a summary manner passed ouer all the most Phisicall & chirurgicall notes which burtheneth the mind of our *English House-wife*, beeing as much as needfull for the preservation of the health of her Family: and hauing in this chapter shewed all the inward vertues wherewith shee should bee adorned. I will now returne to her more outward and actiue knowledges, wherein albeit the mind bee as much occupied as before; yet is the body a great deale more in vse: neither can the worke be well effected by rule or direction.

CHAP. II.

Of the outward and actiue knowledge of the House-wife; and of her skill in Cookerie; As Sallets of all sorts, with Flesh, Fish, Sauces, Pastrie, Banqueting-stuffe, and ordering of great feasts: Also Distillations, Perfumes, conceited Secrets, and preserving Wine of all sorts.

Speake then of the outward and actiue knowledges which belong to our English Housewife, I hold the first and most principall to be a perfect skill and knowledge in Cookery, together with all the secrets belonging to the same, because it is a dutie rarely belonging to the woman; and she that is vterly ignorant therein, may not by the lawes of strict Iustice challenge the freedome of Marriage, because indeed she can then but performe halfe her vow; for she may loue and obey, but shee cannot serue and keepe him with that true dutie which is euer expected.

To proceede then to this knowledge of Cookery, you shall vnderstand, that the first steppe thereunto is, to haue knowledge of all sorts of hearbs belonging to the Kitchen, whether they be for the Pot, for Sallets, for Sauces, for Seruings, or for any other Seasoning, or adorning; which skill of knowledge of the Hearbs she must get by her owne labour and experience, and not by my relation, which would be much too tedious, and for the vse of them, she shall see it in the composition of dishes and meates here-after following. She shall also know the time of the yeere, Month and Moone, in which all Hearbs are to bee sowne; and when they are in their best flourishing, that gathering all Hearbs in their height of goodnesse, she may haue the prime vse of the same. And because I will inable, and not burthen her

She must know all Hearbs:

I

memorie,

memorie, I will here giue her a ſhort Epitomic of all that knowledge.

*Her ſkill in
the Garden.*

First then, let our English Houſ-wife know, that ſhe may at all times of the Moneth and Moone, generally ſow *Asparagus, Colworts, Spinage, Lettice, Parſnips, Radish, and Chynes.*

In February, in the new of the Moone, ſhe may ſow *Spyke, Garlick, Borage, Bugloſe, Cheruyle, Coriander, Gourds, Cresses, Marioram, Palma Chriſti, Flower gentle, white Poppie, Purſlan, Radish, Rocket, Roſemarie, Sorrell, Double Marigolds and Time.* The Moone full ſhe may ſow *Aniſeedes muſked, Violets, Bleets, Skyrrets, white Succory, Fennell, and Parſlie.* The Moone old, ſow *Holy Thyiſtell, Cole Cabadge, white Cole, greene Cole, Cucumbers, Harts-Horne, Diers Graine, Cabadge, Lettice, Mellons, Onions, Parſnips, Larkes Heele, Burnet and Leekes.*

In March the Moone new, ſow *Garlick, Borage, Bugloſe, Cheruyle, Coriander, Gourds, Marioram, white Poppie, Purſlan, Radish, Sorrell, Double Marigolds, Time, Violets.* At the full Moone; *Aniſeedes, Bleets, Skirrets, Succorie, Fennell, Apples of Lone, and Marueilous Apples.* At the wane; *Artichokes, Baſſill, Bleſſed Thistle, Cole Cabadge, white Cole, Greene Cole, Citrons, Cucumbers, Harts-Horne, Samphire, Spinage, Gilliflowers, Iſſop, Cabadge, Lettice, Mellons, Mugrets, Onions, Flower Gentil, Burnet, Leekes and ſauorie.* In May, the Moone old, ſow *Bleſſed Thistle.* In Iune, the Moone new, ſow *Gourds and Radishes.* The Moone old, ſow *Cucumbers, Mellons, Parſnips.* In Iuly, the Moone at full, ſow *white Succorie*: and the Moone old, ſow *Cabadge, Lettice.* Laſtly, in Auguſt, the Moone at the full, ſow *white Succorie.*

*Transplan-
ting of
Heerbs.*

Alſo ſhe muſt know, that Hearbs growing of Seeds, may be tranſplanted at all times, except *Cheruyle, Arage, Spynage,* and *Pſelye*, which are not good being once tranſplanted, obſeruing euer to tranſplant in moiſt and rainie weather.

Alſo

Also she must know, that the choice of feedes are two- *Choice of*
fold, of which some grow best, being new, as *Cucumbers feedes.*
and *Leekes*, and some being old as *Coriander, Parsly, Sanerie,*
Beets, Origan, Cresses, Spinage and *Poppy*, you must keepe cold
Lettice, Artichokes, Basil, Holy Thistle, Cabadge, Cole, Diers
Graine, and *Mellons*, fifteene dayes after they put forth of
the earth.

Also feedes prosper better being sowne in temperate *Prosperity*
weather, then in hot, cold, or drie daies. In the Moneth of *of feedes.*
Aprill, the Moone being new, sow *Marioram, Flower-gentle,*
Time, Violets: in the full of the Moone, *Aples of loue,* and *mar-*
ueilous Apples: and in the wane, *Artichokes, Thistles, Cabadge,*
Cole, Cierons, Harts-horne, Samphire, Gilliflowers, and *Parse-*
nips.

Seedes must be gathered in faire weather ; at the wane *Gathering*
of the Moone, and kept some in boxes of wood, some in *of feedes.*
bagges of leather, and some in vessels of earth, and after to
be well cleansed and dried in the Sunne or shadow; other-
some, as *Onions, Chibols* and *Leekes*, must be kept in their
husks. Lastly, she must know, that it is best to plant in the
last of the Moone ; to gather grafts in the last but one, and
to graft two daies after the change, and thus much for her
knowledge briefly of Hearbs, and how she shal haue them
continually for her vse in the Kitchin.

It resteth now that I proceede vnto Cookerie it selfe, **OF**
which is the dressing and ordering of meate, in good and *Cookery and*
wholsome manner ; to which, when our *Hous* wife shall *the parts*
addresse her selfe, she shall well vnderstand, that these qua- *thereof.*
lities must euer accompanie it : First, she must be cleanly
both in body and garments, she must haue a quicke eye, a cu-
rious nose, a perfect taste, and a ready eare (she must not be
butter-fingred, sweete-toothed, nor faint-hearted;) for, the
first will let euery thing fall, the second will consume what

it should increase, and the last will loose time with too much nicenesse. Now for the substance of the Art it selfe, I will diuide it into fve parts; the first, Sallats and Fricases; the second, boyled Meates and Broaths; the third, Roast meates, and Carbonados; the fourth, Bak't meates and Pies; and the fifth, Banqueting and made dishes, with other conceits and secrets.

Of Sallats.

Simple Sallats.

First then to speake of Sallats, there be some simple, and some compounded; some only to furnish out the table, and some both for vse and adoration: your simple Sallats are Chibols pilled, washt cleane, and halfe of the greene tops cut cleane away, so serued on a Fruit dish, or Chines, Scallions, Radish-rootes, boyled Carrets, Skirrets, and Turneps, with such like serued vp simply: also, all young Lettice, Cabage lettice, Porflan, and diuers other herbs which may be serued simply without any thing, but a little Vinegar, Sallet-Oyle, and Sugar: Onions boyled, and stript from their rind, and serued vp with Vinegar, oyle and Pepper is a good simple Sallat; so is Samphire, Beane-cods, Sparagus, and Cucumbers, serued in likewise with Oyle, Vinegar and Pepper, with a world of others, too tedious to nominate.

Of compound Sallats.

Your compound Sallats, are first the young Buds and Knots of all manner of wholesome hearbes at their first springing; as Red-sage, Mints, Lettice, Violets, Marigolds, Spinage, and many other mixed together, and then serued vp to the table with Vinegar, Sallet Oyle and Sugar.

Another compound Sallat.

To compound an excellent Sallat, and which indeed is vsuall at great feasts, and vpon Princes tables: Take a good quantitie of blancht Almonds, and with your shredding Knife cut them grossely; then take as many Raisins of the Sunne cleane washt, and the stones pickt out, as many Figs shred like the Almonds, as many Capers, twice so many Olynes,

Oliues, and as many Currants as of all the rest cleane washt: a good handfull of the small tender leaues of red Sage and Spinage: mixe all these well together with good store of Sugar, and lay them in the bottome of a great dish; then put vnto them Vinegar and Oyle, and scrape more Suger ouer all: then take Orenge and Lemons, and paring away the outward pills, cut them into thinne slices, then with those slices couer the Sallet al ouer; which done, take the the fine thinne leafe of the red Cole-flower, and with them couer the Orenge and Lemons all ouer; then ouer those red leaues lay another course of old Oliues, and the slices of well pickled Cucumbers, together with the very inward heart of your Cabbage lettice cut into slices; then adorne the sides of the dish, and the top of the Sallet with moe slices of Lemons and Orenge, and so serue it vp.

To make an excellent compound boild Sallat: take of Spinage well washt, two or three handfulls, and put it into faire water, and boile it till it be exceeding soft, and tender as pap; then put it into a Cullander and draine the water from it, which done, with the backside of your Chopping-knife chop it, and bruisse it as small as may be: then put it into a Pipkin with a good lump of sweete butter, and boile it ouer againe; then take a good handfull of Currants cleane washt, and put to it, and stirre them well together; then put to as much Vinegar as will make it reasonable tart, and then with Suger season it according to the taste of the Master of the house, and so serue it vpon sippets. *An excellent boild Sallet.*

Your preserued Sallats are of two kinds, either pickled, as are Cucumbers, Samphire, Purslan, Broome, and such like, or preserued with Vinegar; as Violets, Prim-rose, Cowslips, Gillyflowers of all kinds, Broome-flowers, and for the most part any wholesome flower whatsoeuer. *Of preseruing of Sallets.*

Now for the picking of Sallats, they are onely boyled, and then drained from the water, spread vpon a table, and good store of Salt throwne ouer them, then when they are thorow cold, make a Pickle with Water, Salt, and a little Vinegar, and with the same pot them vp in close earthen pots, and serue them forth as occasion shall serue.

Now for preseruing Sallats, you shall take any of the Flowers before-said after they haue been pickt cleane from their stalkes, and the white ends (of them which haue any) cleane cut away, and washt and dried, and taking a glasse-pot like a Gally-pot, or for want thereof a Gally-pot it selfe; and first strew a little Sugar in the bottom, then lay a layer of the Flowers, then couer that layer ouer with Sugar, then lay another layer of the Flowers, and another of Sugar; and thus doe one aboue another till the pot be filled, euer and anon pressing them hard downe with your hand: this done, you shal take of the best and sharpest Vinegar you can get (and if the vinegar be distilled vinegar, the Flowers wil keepe their colours the better) and with it fill vp your pot till the Vinegar swim aloft, and no more can be receiued; then stop vp the pot close, and set them in adrie temperate place, & vse them at pleasure, for they wil last all the yeere.

*The making
of strange
Sallats*

Now for compounding of Sallats of these pickled and preserued things, though they may be serued vp simply of themselues, and are both good and daintie; yet for better curiositie, and the finer adorning of the table, you shall thus vse them: First, if you would set forth any red Flower that you know or haue seene, you shall take your pots of preserued Gilliflowers, and futing the colours answerable to the Flower you shall proportion forth, lay the shape of the Flower in a Fruit dish; then with your Purflan leaues make the greene Coffin of the Flower, and with the Purflan stalkes, make the stalke of the Flower, and the diuisions
of

of the leaues and branches; then with the thin slices of Cucumbers make their leaues in true proportions, iagged or otherwise: and thus you may set forth some full blowne, some halfe blowne, and some in the bud, which will bee pretty and curious. And if you will set forth yellow flowers, take the pots of Primroses and Cowslips, if blew flowers, then the pots of Violets, or Buglosse Flowers; and these Sallats are both for shew and vse; for they are more excellent for taste then to looke on.

Now for Sallats for shew onely, and the adorning and setting out of a table with numbers of dishes, they be those which are made of Carret rootes of fundrie colours well boiled, and cut out into many shapes and proportions, as some into knots, some in the manner of Scutchions and Armes, some like Birds, and some like wild Beasts, according to the Art and cunning of the Workman; & these for the most part are seasoned with Vinegar, Oyle, and a little Pepper. A world of other Sallats there are, which time and experience may bring to our *Hous-wifes* eye, but the composition of them, and the seruing of them differeth nothing from these already rehearsed.

Now to proceed to your Fricases, or *Quelque choses*, which are dishes of many compositions, and ingredients; as Flesh, Fish, Egges, Hearbs, and many other things, all being prepared and made ready in a frying pan, they are like-
Of *Fricases* and *Quelque choses*.

Your simple Fricases are Egges and Collops fried, whether the Collops be of Bacon, Ling, Beefe, or young Porke, the frying whereof is so ordinarie, that it needeth not any relation, or the frying of any Flesh or Fish simple of it selfe with Butter or sweete Oyle.
Of simple *Fricases*.

To haue the best Collops and Egges, you shall take the whitest and youngest Bacon; and cutting away the sward,
Best Collops and Egges.
 cut

cut the Collops into thin slices, lay them in a dish, and put hot water vnto them, and so let them stand an hower or two, for that will take away the extreame saltnesse: then draine away the water cleane, and put them into a drie pewter dish, and lay them one by one, and set them before the heate of the fire, so as they may toast, and turne them so, as they may toast sufficiently thorow and thorow: which done, take your Egges and breake them into a dish, and put a spoonefull of Vinegar vnto them: then set on a cleane Skillet with faire water on the fire, and as soone as the water boileth put in the Egges, and let them take a boile or two, then with a spoone trie if they be hard enough, and then take them vp, and trim them, and drie them; and then dishing vp the Collops, lay the Egges vpon them, and so serue them vp: and in this sort you may potch Egges when you please, for it is the best and most wholsome.

*Of the com-
pound frie-
cases.*

Now the compound Fricases are those which consist of many things, as Tanseys, Fritters, Pancakes; & any *Quelque chose* whatsoeuer, being things of great request and estimation in *France, Spaine, and Italy*, and the most curious Nations.

*To make the
best Tansey.*

First then for making the best Tansey, you shall take a certaine number of Egges, according to the bignesse of your frying-pan, and breake them into a dish, abating euer the white of euery third Egge; then with a Spooone you shall cleanse away the little white Chickin-knots which sticke to the yelkes; then with a little Creame beate them exceedingly together: then take of greene Wheat blades, Violet leaues, Straw-berry leaues, Spinage and Succorie, of each a like quantitie, and a few Wall-nut buds; chop and beate all these very well, and then straine out the iuyce, and mixing it with a little more Creame, put it to the Egges, and stirre all well together; then put in a few crummes of bread,

Bread, fine grated Bread, Cinamon, Nutmegge and Salt, then put some sweete Butter into the Frying-pan, and so soone as it is melted, put in the Tansey, and frie it browne without burning, and with a dish turne it in the Pan as occasion shall serue, then serue it vp, hauing strewed good store of Suger vpon it, for to put in Suger before will make it heauie: some vse to put of the hearbe Tansey into it, but the Wall-nut tree buds doe giue the better taste; therefore when you please to vse the one, doe not vse the other.

To make the best Fritters, take a pint of Creame and *The best* warme it: then take eight Eggs, onely abate fowre of the *Fritters.* Whites, and beate them well in a dish, and so mixe them with the Creame, then put in a little Cloues, Mace, Nutmeg and Saffron, and stirre them well together: then put in two spoonefull of the best Ale-barme, and a little Salt, and stirre it againe: then make it thicke according to your pleasure with Wheate-flower; which done, set it within the aire of the fire, that it may rise and swell; which when it doth, you shall beate it in once or twice, then put into it a penny pot of Sack: all this being done, you shall take a pound or two of sweete seame, and put it into a pan, and set it ouer the fire, and when it is moulten and begins to bubble, you shall take the Fritter-batter, and setting it by you, put thick slices of well-pared Apples into the batter: and then taking the Apples and batter out together with a spoone put it into the boyling seame, and boyle your Fritters crispe and browne: and when you find the strength of your seame decay, you shall renew it with more seame, and of all sorts of seame, that which is made of the beefe-suet is the best and strongest: when your Fritters are made strow good store of Suger and Cinamon vpon them, being faire disht, and so serue them vp.

*The best
Pancake.*

To make the best Pancake, take two or three Egges, and breake them into a dish, and beate them well: then adde vnto them a pretty quantitie of faire running water, and beate all well together: then put in Cloues, Mace, Cinnamon, and a Nutmeg, and season it with Salt: which done, make it thick as you thinke good with fine Wheat flower: then frie the cakes as thin as may be with sweete Butter, or sweete Seame, and make them browne, and so serue them vp with Sugar strowed vpon them. There be some which mixe Pancakes with new Milke or Creame, but that makes them tough, cloying, and not so crispe, pleasant and sauerie as running water.

Veale toasts.

To make the best Veale toasts, take the kidney fat, and all of a loyne of veale roasted, and shred it as small as is possible; then take a couple of Egges and beat them very well; which done, take Spinage, Succory, Violet leaues, and Marigold leaues, and beate them, and straine out the iuice, and mix it with the Egges: then put it to your Veale, and stirre it exceedingly well in a dish; then put to good store of Currance cleane washt and pickt, Cloues, Mace, Sinamon, Nutmeg, Sugar and Salt, and mix them all perfectly well together: then take a Manchet and cut it into toasts, and toste them well before the fire; then with a spoone lay vpon the toste in a good thickeesse the Veale, prepared as before-said: which done, put into your frying pan good store of sweete Butter, and when it is well melted and very hot, put your tosts into the same with the bread side vppward, and the flesh side downeward: and as soone as you see they are fried browne, lay vpon the vpperside of the tostes which are bare more of the flesh meate, and then turne them, and frie that side browne also: then take them out of the pan and dish them vp, and strow Sugar vpon them, and so serue them forth. There be some Cookes which will do this but
vpon

vpon one side of the tostes, but to do it on both is much better; if you adde Creame it is not amisse.

To make the best Panperdy, take a dozen Egges, and breake them, and beat them very well, then put vnto them Cloues, Mace, Cinamon, Nutmeg, and good store of Sugar, with as much Salt as shall season it: then take a Manchet, and cut it into thick slices like tostes; which done, take your frying pan, and put into it good store of sweete Butter, and being melted lay in your slices of bread, then powre vpon them one halfe of your Egges; then when that is fried, with a dish turne your slices of bread vpward, and then powre on them the other halfe of your Eggs, and so turne them till both sides bee browne; then dish it vp, and serue it with Sugar strowed vpon it.

To make the best panperdie.

To make a Quelquechose, which is a mixture of many things together; take the Eggs and breake them, and do away the one halfe of the Whites, and after they are beaten put to them a good quantitie of sweete Creame, Currants, Cinamon, Cloues, Mace, Salt, and a little Ginger, Spinage, Endiue, and Marigold flowers grossely chopt, and beate them all very well together; then take Piggs Pettitoes slic't, and grossely chopt, and mixe them with the eggs, and with your hand stirre them exceeding well together; then put sweet butter in your frying pan, and being melted, put in all the rest, and frie it browne without burning, euer and anon turning it till it be fried enough; then dish it vp vpon a flat Plate, and couer it with Sugar, and so serue it forth. Only herein is to be obserued, that your Pettitoes must be very well boyled before you put them into the frycase.

To make any quelquechose.

And in this manner as you make this Quelquechose, so you may make any other, whether it be of flesh, smal birds, sweet roots, oysters, muskles, cockles, giblets, lemons, oranges, or any fruit, pulse; or other sallet herbe whatsoeuer; of

which to ſpeake ſeuerally were a labour infinite, becauſe they vary with mens opinions. Only the compoſition and worke is no other then this before preſcribed; and who can doe theſe, neede no inſtruction for the reſt. And thus much for Sallers and Frycaſes.

Addi-
tions

*to the houſ-
wifes Cooke-
rie.*

*To make
Fritters.*

To make Fritters another way, take Flower, Milke, Barne, grated Bread, ſmall Rayſings, Cinamon, Sugar, Cloues, Mace, Pepper, Saffron and Salt; ſtirre all theſe together very well with a ſtrong ſpoone, or ſmall ladle; then let it ſtand more then a quarter of an hower that it may riſe, then beate it in againe, and thus let it riſe and be beat in twice or thrice at leaſt; then take it and bake them in ſweete and ſtrong Seame, as hath been before ſhewed; and when they are ſerued vp to the Table, ſee you ſtrow vpon them good ſtore of Sugar, Cynomon and Ginger.

*To make
the beſt
white Pud-
dings.*

Take a pint of the beſt, thickeſt and ſweeteſt Creame, and boile it, then whileſt it is hot, put thereunto a good quantitie of faire great Oat-meale Grotes cleane pickt, and formerly ſteept in Milke twelue houres at leaſt, and let it ſoake in this Creame another night; then put there- to at leaſt eight yelks of Egges, a little Pepper, Cloues, Mace, Saffron, Currants, Dates, Sugar, Salt, and great ſtore of Swines ſuet, or for want thereof, great ſtore of Beeſe ſuet, and then fill it vp in the Farmes according to the order of good houſwiferie, & then boyle them on a ſoft and gentle fire, and as they ſwell, prick them with a great pin, or ſmall awle, to keepe them that they burſt not; and when you ſerue them to the Table (which muſt be not till they be a day old,) firſt, boyle them a little, then take them out and toaſt them browne before the fire, and ſo ſerue them, trimming the edge of the diſh either with Salt or Sugar.

*Puddings of
a Hogs Li-
uer.*

Take the Liuer of a fat Hog, and parboyle it, then ſhred it ſmall, and after beate it in a Morter very fine; then mixe

it

it with the thickest and sweetest Creame, and straine it very well through an ordinary strainer; then put thereto six yelkes of Egges, and two whites, and the grated crums of neere-hand a penny white loafe, with good store of Currants, Dates, Cloues, Mace, Sugar, Saffron, Salt, and the best Swine suet, or Beeffe suet, but Beeffe suet is the more wholesome, and lesse loosening; then after it hath stood a while, fill it into the farmes, and boyle them, as before shewed: and when you serue them to the Table, first, boyle them a little, then lay them on a Gridyron ouer the coales, and broyle them gently, but scorch them not, nor in any wise breake their skinnies, which is to bee prevented by oft turning and tossing them on the Grid-yron, and keeping a slow fire.

Take the Yelkes and Whites of ten or twelue Eggs, and hauing beate them well, put to them the fine powder of Cloues, Mace, Nutmegs, Sugar, Cynamon, Saffron and Salt; then take the quantity of two loaues of grated bread, Dates (small shred) and great store of Currants, with good store either of Sheepes, Hoggs, or Beeffe-suet beaten and cut small; then when all is mixt well together, and hath stood a while to settle, then fill it into the farmes as hath been before shewed, and in like manner boile them, cooke them, and serue them to the Table. *To make bread Puddings.*

Take halfe a pound of Rice, and steepe it in new milke a whole night, and in the morning draine it, and let the Milke drop away; then take a quart of the best, sweetest, and thickest Creame, and put the Rice into it, and boyle it a little; then set it to coole an hower or two, & after put in the Yelkes of halfe a dozen Egges, a little Pepper, Cloues, Mace, Currants, Dates, Sugar and Salt; and hauing mixt them well together, put in great store of Beeffe Suet well beaten, and small shred, and so put it into the farmes, and *Rice Puddings.*

boyle them as before shewed, and serue them after a day old.

*Another of
Liner.*

Take the best Hoggs Liuer you can get, and boyle it extremely till it bee as hard as a stone; then lay it to coole, and being cold, vpon a great bread-grater grate it all to powder, then sift it through a fine meale-sieue, and put to it the crummes of (at least two peny loaves of) white bread, and boyle al in the thickest and sweetest Creame you haue till it be very thick; then let it coole, and put to it the yelks of halfe a dozen Egges, a little Pepper, Cloues, Mace, Corants, Dates small shred, Cinamon, Ginger, a little Nutmeg, good store of Sugar, a little Saffron, Salt, and of Beefe and Swines suet great plenty, then fill it into the Farmes, and boyle them as before shewed,

*Puddings of
a Calues
Mugget.*

Take a Calues Mugget, cleane and sweete drest, and boyle it well; then shred it as small as is possible, then take of Strawberry leaues, of Endyue, Spynage, Succorie, and Sollell, of each a pretty quantitie, and chop them as small as is possible, and then mixe them with the Mugget; then take the Yelkes of halfe a dozen Egges, and three Whites, and beate them into it also, & if you find it is to stiffe, then make it thinner with a little Creame warmed on the fier; then put in a little Pepper, Cloues, Mace, Cynamon, Ginger, Sugar, Currants, Dates and Salt, and worke all together, with casting in little peyres of sweet Butter one after another, till it haue receiued good store of Butter; then put it vp into the Calues bagge, Sheeps bagge, or Hogs bagge, and then boyle it well, and so serue it vp.

*A Blood
Pudding.*

Take the Blood of an Hogge whilst it is warme, and steepe in it a quarte, or more, of great Oate-meale grotes, and at the end of three dayes with your hands take the Grots out of the blood, and draine them cleane; then put put to those Grotes more then a quarte of the best creame warmed

warmd on the fire; then take Mother-of-Time, Parsely, Spinnage, Succory, Endiue, Sorrel and Strawberry leaues, of each a few chopp exceeding small, and mixe them with the Grots, and also a little Fenell seede finely beaten; then adde a little Pepper, Cloues and Mace, Salt, and great store of Suet finely shred, and well beaten; then therewith fill your Farmes, and boyle them, as hath been before described.

Take the largest of your Chines of Porke, and that which is called a Liste, and first with your knife cut the the leane thereof into thin slices, and then shred small those slices, and then spread it ouer the bottom of a dish or wooden platter; then take the fat of the Chine and the Liste, and cut it in the same manner, and spread it vpon the leane, and then cut more leane, and spread it on the fat, and thus doe one leane vpon another till all the Porke bee shred, obseruing to begin and end with the leane; then with your knife scorch it through and through diuers wayes, and mixe it all well together: then take good store of Sage, and shred it exceeding small, and mixe it with the flesh, then giue it a good season of Pepper and Salt; then take the farmes made as long as is possible, and not cut in pieces as for Puddings, and first blow them well to make the meat slip, and then fill them: which done, with threads deuide them into seuerall linkes as you please, then hang them vp in the corner of some Chimney cleane kept, where they may take ayre of the fire, and let them drie there at least foure dayes before any be eaten, and when they are serued vp, let them be either fried or boyld on the Gridyron, or else roasted about a Capon.

Linkes.

It resteth now that we speak of boild meats and broths, which forasmuch as our Houf-wife is intended to be generally, one that can as well feed the poore as the rich, we will first

OF

*Boild meates
ordinarie.*

first begin with those ordinarie wholesome boyld meates, which are of vse in euery good mans house: therefore to make the best ordinarie Pottage, you shall take a racke of Mutton cut into pieces, or a leg of Mutton cut into pieces; for this meate and these ioynts are the best, although any other ioynt, or any fresh Beefe will likewise make good Pottage: and hauing washt your meate well, put it into a cleane pot with faire water, and set it on the fire, then take *Violet* leaues, *Succory*, *Strawbery* leaues, *Spinage*, *Langdebeefe*, *Marigold* flowers, *Scallions*, & a little *Parsly*, & chop the very small together, then take halfe so much Oat-meale well beaten as there is Hearbs, and mixe it with the Hearbs, and chop all very well together: then when the pot is ready to boyle, skum it very wel, and then put in your hearbs, and so let it boyle with a quick fire, stirring the meate oft in the pot, till the meate bee boyld enough, and that the hearbs and water are mixt together without any separation, which will bee after the consumption of more then a third part: Then season them with Salt, and serue them vp with the meate either with Sippers or without.

Pottage
without sight
of hearbs.

Some desire to haue their Pottage Greene, yet no herbs to be seene in this case: you must take your hearbs and Oat-meale, and after it is chopt, put it into a stone Morter, or Bowle, and with a wooden pestell beate it exceedingly; then with some of the warme liquor in the pot straine it as hard as may be, and so put it in and boyle it.

Pottage
without
hearbs.

Others desire to haue Pottage without any hearbs at all, And then you must only take Oat-meale beaten, and good store of Onions, and put them in, and boile them together, and thus doing you must take a greater quantitie of Oat-meale then before.

Pottage
with whole
hearbs.

If you wil make pottage of the best & daintiest kind, you shall take Mutton, Veale, or Kid, & hauing broke the bones, but

but not cut the flesh in peeces, and wash it, put it into a pot with faire water, after it is ready to boile, and is thoroughly skumd, you shal put in a good handfull or two of smale oat-meale: & then take whole lettice of the best & most inward leaues, whole spinage, endiue, succory, and whole leaues of colasl orry, or the inward parts of white cabage, with two or three slic't onions; and put all into the pot and boile them well together till the meat be enough, and the herbes so soft as may be, and stirre them oft well together; and then season it with salt and as much veriuiice as will onely turne the tast of the portage; and so serue them vp, couering the meat with the whole hearbes, and adorning the dish with sippets.

To make ordinary stewd broth, you shall take a necke of veale, or a leg, or mary bones of beefe, or a pullet, or mutton, and after the meat is washt, put it into a pot with faire water, and being ready to boile, skumme it well; then you shall take a couple of manchets, and paring away the crust, cut it into thicke slices, and lay them in a dish, and couer them with hot broth out of the pot; when they are steapt, put them and some of the broth into a strainer, and straine it, and then put it into the pot; then take halfe a pound of Prunes, halfe a pound of Raisins, and a quarter of a pound of Currants cleane pickt & washt, with a litle whole Mace and two or three bruised Cloues, and put them into the pot, and stirre all well together, and so let them boile till the meate be enough; then if you will alter the colour of the broth, put in a litle Turnesole, or red Saunders, and so serue it vpon Sippets, and the fruit yppermost.

To make ordinary stewd broth.

To make an excellent boyled meate: take fowre peeces of a racke of Mutton, and wash them cleane and put them into a pot well scowred with faire water; then take a good quantity of wine and veruice and put into it; then slice a

A fine boild meate.

handfull

handfull of Onions and put them in also, and so let it boile a good while, then take a peece of sweet butter with ginger and salt and put it to also, and then make the broth thicke with grated bread, and so serue it vp with sippets.

*To boile a
Mallard.*

To boile a Mallard curiously, take the Mallard when it is faire dressed, washed and trust, and put it one a spit and rost it till you can get the grauy out of it; then take it from the spit and boile it, then take the best of the broth in a pipkin, and the grauy which you saued, with a peece of sweete butter and Currants, Vineger, Sugar, Pepper and grate d bread: Thus boile all these together, and when the Mallard is boiled sufficiently, lay it on a dish with sippets, and the broth vpon it, and so serue it forth.

*To make an
excellens
Olepotrige.*

To make an excellent *Olepotrige*, which is the onely principall dish of boild meate which is esteemed in all *Spaine*, you shall take a very large vessell, pot or kettell, and filling it with water, you shall let it on the fire; and first put in good thicke gobbets of well fed Beefe, and being ready to boile, skumme your pot; when the Beefe is halfe boiled, you shall put in Potato roots, Turneps, and Skirrets: also like gobbets of the best Mutton, and the best Porke; after they haue boyled a while, you shall put in the like gobbets of Venison red, and Fallow, if you haue them; then the like gobbets, of Veale, Kidde, and Lamb; a little space after these, the foreparts of a fat Pigge, and a crambd Puller; then put in Spinage, Endiue, Succory, Marigold leaues & flowers, Lettice, Violet leaues, Strawberry leaues, Buglosse and Scallions, all whole and vichoot; then when they haue boiled a while, put in a Partridge and a Chicken chopt in peeces, with Quailles, Rails, Blackbirds, Larkes, Sparrowes and other small birds, all being well and tenderly boiled, season vp the broth with good store of Sugar, Cloues, Maer, Cinnamon, Ginger

and

and Nutmegge mixt together in a good quantity of Veri-
juice and salt, and so stirre vp the pot well from the bot-
tome, then dish it vp vpon great Chargers, or long Spanish
dishes made in the fashion of our English wooden trayes,
with good store of sippets in the bottome; then couer
the meate all ouer with Prunes, Raifins, Currants, and
blaunch't Almonds, boiled in a thing by themselves; then
couer the fruite and the whole boiled hearbes, and the
hearbes with slices of Orenge and Lemmons, and lay the
roots round about the sides of the dish, and strew good
store of Sugar ouer all, and so serue it foorth.

To make the best white broth, whether it be with
Veale, Capon, Chickins, or any other Fowle or Fish: First
boile the flesh or fish by it selfe, then take the valew of a
quart of strong mutton broth, or fat Kidde broth, and
put it into a pipkin by it selfe, and put into it a bunch of
Time, Marierome, Spinage and Endiue bound together;
then when it seethes put in a pretty quantity of Beefe-
marrow, and the marrowe of Mutton, with some whole
Mace and a few bruised Cloues; then put in a pinte of
White-wine with a few whole slices of Ginger; after
these haue boiled a wile together, take blanch't Al-
monds, and hauing beaten them together in a mortar
with some of the broth, straine them and put it in also;
then in another pipkin boile Currants, Prunes, Raifins,
and whole Cinamon in veriuiice and sugar, with a few
sliced Dates, and boile them til the veriuiice be most part
consumed, or at least come to a syrrop; then draine the
fruit from the syrrop, and if you see it be high coloured;
make it white with sweete creame warmed, and so mixe
it with your wine broth; then take out the Capon or the
other Flesh or fish, and dish it vp dry in a clean dish; then
powre the broth vpon it, and lay the fruite on the top of

*To make the
best white
broath.*

the meate, and adorne the side of the dish with sippets;
first *Orenge*s, *Lemmons* and *Sugar*, and so serue it forth.

To boile any
wild Fowle.

To boile any wild *Fowle*, as *Mallard*, *Teale*, *Widgeon*, or
such like: First boile the *Fowle* by it selfe, then take a
quart of strong *Mutton* broth, and put it into a pipkin, and
boile it; then put into it good store of sliced *Onions*, a bunch
of sweete pot-herbes, and a lump of sweete butter; after
it hath boiled well, season it with veriuice, salt and sugar,
and a little whole *Pepper*; which done, take vp your *Fowle*
and breake it vp according to the fashion of caruing, and
sticke a few *Cloues* about it; then put it into the broth with
Onions, and there let it take a walme or two, & so serue
it and the broth forth vpon Sippets, some vse to thicken
it with toasts of bread steep and strained, but that is at
please the Cooke.

To boile a
legge of
Mutton.

To boile a legge of *Mutton*, or any other joint of
meate whatsoeuer; first after you haue washt it cleane,
parboile it a little, then spit it and giue it halfe a dozen
turnes before the fire, then draw it when it beginnes to
drop, and presse it betweene two dishes, and saue the
gravy; then slash it with your knife, and giue it halfe a do-
zen turnes more, and then presse it againe, and thus doe
as often as you can force any moisture to come from it;
then mixing *Mutton* broth, *White-wine*, and *Veriuice*
together, boile the *Mutton* therein till it be tender, and
that most part of the liquor is cleane consumed; then
hauing all that while kept the gravy you tooke from the
Mutton, stewing gently vpon a Chaffing-dish and coales,
you shall adde vnto it good store of salt, sugar, cinamon &
ginger, with some *lemmon* slices, and a little of an
Oringe pill, with a few fine whitebread crums: then ta-
king vp the *Mutton*, put the remainder of the broth in
which it lay to the gravy, and then serue it vp with sip-
pets

pets, laying the *Lemmon* slices vppermost, and trimming the dish about with *Sugar*.

If you will boile *Chickens*, young *Turkies*, *Pea-hens*, or any house-Fowle daintily, you shall after you haue trimmed them, drawne them, trust them, and washt them, fill their bellies as full of *Parfly* as they can hold; then boile them with salt and water onely till they be enough: then take a dish and put into it veriuiice, and *butter*, and *salt*, and when the *butter* is melted, take the *Parfly* out of the *Chickens* bellies, and mince it very small, and put it to the veriuiice and *butter*, and stirre it well together; then lay in the *Chickens*, and trimme the dish with sippets, and so serue it forth.

An excellent way to boile Chickens.

If you will make broth of any fresh fish whatsoeuer, whether it be *Pike*, *Bream*, *Carpe*, *Eele*, *Barbell* or such like: you shall boile water, veriuiice & *salt* together with a handfull of sliced *Onions*; then you shall thicken it with two or three spoonefull of *Ale-barme*; then put in a good quantity of whole *barberies*, both branches and other, as also pretty store of *Currants*: then when it is boild enough, dish vp your *fish*, and powre your broth vnto it, laying the fruit and *Onions* vppermost. Some to this broth will put *Prunes* and *Dates* slic't, but it is according to the fancy of the Cooke, or the will of the House-holder. Thus I haue from these few presidents shewed you the true Art and making of all sorts of boild-meates, and broths; and though men may coine strange names, and faine strange Art, yet be assured she that can doe these, may make any other whatsoeuer; altering the tast by the alteration of the compounds as shee shall see occasion: And when a broth is to sweet, to sharpen it with veriuiice, when to tart, to sweet it with *sugar*; when flat & wallowish, to quicken it with *Oringes* & *Lemmons*; & when to bitter, to make it pleasant with

A broth for any fresh Fish.

Additi-
ons*To boyle
meates.**A Mallard
smeard, or a
Hare, or old
Conie.*

hearbes & spices: and thus much for broths & boild meats.

Take a Mallard when it is cleane dressed, washed and trust, and parboyle it in water till it be skumd and purified; then take it vp, and put it into a Pipkin with the neck downward, and the tayle vppward, standing as it were vpright; then fill the Pipkin halfe full with that water, in which the Mallard parboyld, and fill vp the other halfe with White Wine; then pill and slice thin a good quantitie of Onyons, and put them in with whole fine Hearbs, according to the time of the yeare, as Lettice, Strawberry leaues, Violet leaues, Vines leaues, Spinage, Endiue, Succorie, and such like, which haue no bitter or hard taste, and a pretty quantitie of Currants and Dates sliced; then couer it close, and set it on a gentle fire, and let it stew, and smoare till the Hearbs and Onyons be soft, and the Mallard enough; then take out the Mallard, and carue it as it were to goe to the Table; then to the Broath put a good lumpe of Butter, Sugar, Cinamon; and if it be in some, so many Goose-berries as will giue it a sharpe taste, but in the Winter as much Wine Vinegar; then heate it on the fire, and stirre all well together; then lay the Mallard in a dish with Sippers, and powre all this broth vpon it; then trim the Egges of the dish with Sugar, and so serue it vp. And in this manner you may also smoare the hinder parts of a Hare, or a whole old Conie, being trust vp close together.

*To stew a
Pike.*

After your Pike is drest and opened in the back, and laid flat, as if it were to frie, then lay it in a large dish for the purpose, able to receiue it; then put as much White Wine to it as will couer it all ouer; then set it on a Chaffing-dish and Coales to boyle very gently, and if any skum arise, take it away; then put to it Currants, Sugar, Cynamon, Barber-berries, and as many Prunes as wil serue to garnish the dish; then couer it close with another dish, and let it stew till the
fruit

fruit be soft, and the Pike enough; then put in a good lumpe of sweet Butter; then with a fine skummer take vp the fish and lay it in a cleane dish with Sippets; then take a cople of Yelkes of Egges, the filme taken away, and beate them well together with a spoonefull or two of Creame, and as soone as the Pike is taken out, put it into the broth, and stir it exceedingly to keepe it from curding; then power the broth vpon the Pike, and trim the sides of the dish with Sugar, Prunes, and Barberies, Slices of Orengees or Lemmons, and so serue it vp. And thus may you also stew Rochets, Gurnets, or almost any sea-fish, or fresh-fish.

Take a Lambs-head and Purtenance cleane washt & pickt To stew a
and put it into a Pipkin with faire water, and let it boile, Lambs head
and skum it cleane; then put in Currants and a few sliced and Purte-
Dates, and a bunch of the best fercing Hearbs tyed vp to- nance.
gether, and so let it boile well till the meate be enough:
then take vp the Lambes head and purtenance, and put it
into a cleane dish with Sippets; then put in a good lumpe
of Butter, and beate the Yelkes of two Egges with a little
Creame, and put it to the Broth with Sugar, Synamon, and
a spoonefull or two of Verduyce, and whole Mace, and as
many Prunes as will garnish the dish, which should bee put
in when it is but halfe boyle, and so power it vpon the
Lambs-head and Purtnance, and adorne the sides of the
dish with Sugar, Prunes, Barberies, Orengees and Lemons,
and in no case forget neuer to season well with Salt, and so
serue it vp.

Take a very good brest of Mutton chopt into sundry A Brest of
large pieces, and when it is cleane washt, put it into a Pip- Mutton
kin with faire water, and set it on the fire to boile; then stewed.
skum it very well, then put in of the finest Parsneps cut in
to large pieces as long as ones hand, and cleane washt and
scrap; then good store of the best onions, and all manner of
swete

sweet pleasant Pot-herbs and *lettice*, all grossely chopt, and good store of *pepper & salt*, and then couer it, & let it stew till the Mutton be enough; then take vp the Mutton, and lay it in a cleane dish with Sippets, and to the broath put a little Wine-vinegar, and so power it on the Mutton with the Parseneps whole, and adorne the sides of the dish with Sugar, and so serue it vp: and as you doe with the Brest, so you may doe with any other Loynt of Mutton.

*To stew a
Neates foote.*

Take a Neates foot that is very well boyld (for the tenderer it is, the better it is) and cleaue it in two, and with a cleane cloth drie it well from the Souse-drinke; then lay it in a deepe earthen platter, and couer it ouer with Verduyce; then set it on a Chaffing-dish and Coales, and put to it a few Currants, and as many Prunes as will garnish the dish; then couer it, and let it boyle well, many times stirring it vp with your knife, for feare it sticke to the bottome of the dish; then when it is sufficiently stewed, which will appeare by the tendernesse of the meate and softnes of the fruit; then put in a good lumpe of Butter, great store of Sugar and Sinamon, and let boyle a little after; then put it altogether into a cleane dish with Sippets, and adorne the sides of the dish with Sugar and Prunes, and so serue it vp.

Of

Roast-meats.

*Observati-
ons in roast
meates.*

*Spitting of
roast meates.*

To proceed then to roast meats, it is to bee vnderstood, that in the generall knowledge thereof are to be obserued these few rules. First, the cleane keeping and scowring of the spits and cobirons; next, the neat picking and washing of meate before it bee spitted, then the spitting and broaching of meate which must bee done so strongly and firmly, that the meat may by no meanes either shrink from the spit, or else turne about the spit: and yet euer to obserue, that the spit doe not goe through any principall part of the meate, but such as is of least account and estimation: and if it be birds or fowle which you spit, then to

let

let the spit goe through the hollow of the body of the Fowle, and to fasten it with pricks or skewers vnder the wings about the thighes of the Fowle, and at the feete or rump, according to your manner of trussing and dressing them. Then to know the temperatures of fiers for euery

*Temperas
ture of fire.*

meate, and which must haue a slow fire, yet a good one, taking leasure in roasting, as Chines of Beefe, *Swannes, Turkies, Peacockes, Bustards*, and generally any great large Fowle, or any other ioints of Mutton, Veale, Porke, Kid, Lambe, or such like: whether it be Venison red, or Fallow, which indeed would lie long at the fire, and soke well in the roasting, and which would haue a quicke and sharpe fire without schorching; as *Pigges, Pullets, Feasants, Partridge, Quaille*, and all sorts of middle sized or lesser fowle, and all small birds, or compound roste-meates, as *Olines* of Veale, Haslets; a pound of butter roasted; or puddings simple of themselves; and many other such like, which indeed would be suddenly & quickly dispatcht, because it is intended in Cookery, that on of these dishes must be made ready whilst the other is in eating. Then to know the complexions of meates, as which must be pale and white roasted, (yet thorowly roasted) as Mutton Veale, Lambe, Kid, *Capon, Pullet, Pheasant, Partridge, Quaille*, and all sorts of middle and small land, or water-fowle, and all small birds, and which must be browne roasted, as Beefe, venison, Porke Swanne, Geese, Pigges, Crane, Bustards, and any large fowle, or other thing whose flesh is blacke.

*The com-
plexions of
meate.*

Then to know the best bastings for meat, which is sweet butter, sweet oyle, barreld butter, or fine rendred vp seame with *sinamon, cloues*, and *mace*. There be some that will bast onely with water, and salt, and nothing else; yet it is but opinion, and that must be the worlds Master alwaies.

*The best ba-
stings of
meates.*

Then the best dredging, which is either fine white-bread crummes,

*The best
dredging.*

crummes well grated, or els a little very fine white meale, and the crummes very well mixt together.

*To know
when meat
is enough.*

Lastly to know when meate is roasted enough; for as too much rarenes is vnholosome, so too much drinesse is not nourishing. Therefore to know when it is in the perfit height, and is neither too moist nor too dry, you shall obserue these signes first in your large ioints of meate, when the stemme or stroke of the meate offendeth, either vp-right or els goeth from the fire, when it beginneth a little to shrinke from the spir, or when the grauy which dropeth from it is cleare without bloodinesse. If it be a Pigge when the eies are fallen out, and the body leaueth piping; for the first is when it is halfe roasted, and would bee singed to make the coat rise and be crackle, and the latter when it is fully enough and would be drawne: or if it be any kind of fowle you rost, when the thighs are tender, or the hinder parts of the pinions at the setting on of the wings, are without blood; then be sure that your meat is fully enough roasted: yet for a better and more certain assurednesse, you may thrust your knife into the thickest parts of the meate, and draw it out againe, and if it bring out white grauy without any bloodishnesse, then assuredly it is enough, and may be drawne with all speed conuenient, after it hath beene well basted with butter not formerly melted, then dredged as aforesaid, then basted ouer the dredging, and so suffered to take two or three turnes, to make crispe the dredging: Then dist it in a faire dish with salt sprinckled ouer it, and so seru'd forth. Thus you see the generall forme of roasting all kind of meat: therefore now I will returne to some particular dishes, together with their seuerall sawces.

*Roasting
mutton with
oysters.*

If you will roast mutton with oysters; take a shoulder a lone, or a legge, and after it is washt parboile it a little; then

then take the greatest oysters, and having opened them in to a dish, draine the grauy cleane from them twice or thrice, then parboile them a little: Also then take spinage endiue, succory, strawberry leaues, violet leaues, and a little parsley, with some scallions, chop these very small together: Then take your oysters very dry, drained, and mixe them with an halfe part of these herbes: Then take your meate and with these oysters and hearbes farce or stop it, leauing no place empty, then spit it and roast it, and whilst it is in roasting take good store of veriuice and butter, and a little salt, and set in a dish on a chaffing-dish and coales: and when it begins to boile, put in the remainder of your herbes without oysters, and a good quantity of currants, with *Cinamon*, and the yelke of a couple of egges: And after they are well boyled and stir'd together, season it vp according to tast with sugar: then put in a few lemmon, slices, and the meate, being enough, draw it and lay it vpon this sawce remooued into a cleane dish, the egges, thereof being trimmed about with sugar, and so serue it forth.

To toast a legge of Mutton after an out-landish fashion, you shall take it after it is washt, and cut out all the flesh from the bone, leauing onely the outmost skinne entirely whole and fast to the bone: then take thicke creame and the yelke of egges and beate them exceedingly well together; then put to *Cinamon*, *Mace*, and a little Nutmegge, with *Salt*, then take bread crumms finely grated and searst with good store of Currants, and as you mixe them with the creame, put in sugar, and so make it into a good stiffnesse. Now if you would haue it looke greene, put in the iuice of sweet hearbes, as *spinage*, *violet* leaues, *Endiue* &c. If you would haue it yellow, then put in a little *Saffron* strained, and with this fill vp the skin of your legge of Mutton in the same shape and forme that it was before,

To roast a
legge of
mutton o-
therwise.

and sticke the out-side of the skinne thick with Cloues, and so roast it thorowly and baste it very well, then after it is dredg'd serue it vp as a legge of Mutton with this pudding, for indeed it is no other: you may stop any other ioint of meate, as breast or loine, or the belly of any Fowle boiled or roast, or rabbit, or any meat else which hath skinne or emptinesse. It into this pudding also you beate the inward pith of an Oxes backe, it is booth good in tast, and excellent soueraigne for any disease, ache or fluxe in the raynes whatsoeuer.

*To roast a
Gigget of
Mutton.*

To roast a Gigget of Mutton, which is the legge splatted, and halfe part of the loine together; you shall after it is washt, stop it with cloues, so spit it, and lay it to the fire, and tend it well with basting: Then you shall take vinegar butter and currants, and set them on the fire in a dish or pipkin; then when it boiles you shall put in sweete herbes finely chopt, with the yelke of a couple of egges, and so let them boile together; then the meat being halfe roasted you shall pare of some part of the leanest and brownest, then shed it very small and put it into the Pipkin also; then season it vp with sugar, cinamon, ginger, and salt, and so put it into a cleane dish. Then draw the Gigget of Mutton and lay it on the sauce, and throw salt on the top, and so serue it vp.

*To roast Oliues of
Veale.*

You shall take a legge of veale and cut the flesh from the bones, and cut it out into thin long slices, then take sweet hearbes and the white parts of scallions, and chop them well together with the yelkes of egges, then rowle it vp within the slices of Veale, and so spit them and roast them; then boile veriuice, butter, sugar, cynamon, currants and sweet herbes together, and being seasoned with a little salt, serue the Oliues vp vpon that sauce with salt, cast ouer them.

To

To roast a Pigge curiously, you shall not scald it, but draw it with the haire on, then hauing washt it, spit it and lay it to the fire so as it may not scorch, then being a quarter roasted, and the skinne blistered from the flesh, with your hand pull away the haire and skinne, and leaue all the fat and flesh perfectly bare: then with your knife scotch all the flesh downe to the bones, then baste it exceedingly with sweet butter and creame, being no more but warme; then dredge it with fine bread-crummes, currants, sugar and salt mixt together, and thus apply dredging, vpon basting, and basting vpon dredging, till you haue couered all the flesh a full inch deepe: Then the meat being fully roasted, draw it and serue it vp whole.

To roast a pound of butter well.

To roast a pound of Butter curiously and well, you shall take a pound of sweet Butter and beate it stiffe with sugar and the yolkes of egges; then clap it round-wise about a spit, and lay it before a soft fire, and presently dredge it with the dredging before appointed for the Pigge; then as it warmeth or melteth, so apply it with dredging till the butter be ouercomed and no more wil melt to fall from it, then roast it browne, and so draw it, and serue it out, the dish being as neatly trim'd with sugar as may be,

To roast a pudding on a spit.

To roast a pudding on a spit, you shall mixe the pudding before spoken of in the leg of Mutton, neither omitting hearbes, nor saffron, and put to a little sweet butter and mix it very stiffe: then fold it about the spit, and haue ready in another dish some of the same mixture well seasoned, but a great deale thinner and no butter at all in it, and when the Pudding doth beginne to roast, and that the butter appeares, then with a spoone couer it all ouer with the thinner mixture, and so let it roast; then if you see no more butter appeare, then baste it as you did the Pigge and lay more of the mixture on, and so continue till all bee

To roast a chine of Beefe, loyne of Mutton, Larke and Capon at one fire, and one instant. spent: And then roast it browne, and so serue it vp. If you will roast a Chine of Beefe, a loyne of Mutton, a Capon, and a Larke, all at one instant and at one fire, and haue all ready together and none burnt: you shall first take your Chine of Beefe and perboile it more then halfe through: Then first take your Capon being large and fat, and spit it next the hand of the turner, with the legges, from the fire, then spit the Chine of Beefe, then the Larke, and lastly the loine of Mutton, and place the Larke so as it may be couered ouer with the Beefe, and the fat part of the loine of Mutton, without any part disclosed: Then bast your Capon, and your loine of Mutton, with cold water, and Salt, the Chine of Beefe with boyling larde: Then when you see the beefe is almost enough, which you shall hasten by schorching and opening of it: then with a cleane cloth you shall wipe the Mutton and Capon all ouer, and then bast it with sweet butter till all bee enough roasted; Then with your knife lay the Larke open which by this time will be stewed betweene the Beefe and Mutton, and basting it also dredge all together; draw them and serue them vp.

To roast Venison. If you wil roast any Venison after you haue washt it, & clenfed al blood from it, you shal sticke it with cloues all ouer on the out side; and if it be leane you shall larde it either with Mutton larde, or Porke larde, but mutton is the best: then spit it and roast it by a good soking fire, then take Vinegar, bread crummes, and some of the gray, which comes from the Venison, and boile them well in a dish: then season it with sugar, cinamon, ginger, and salt, And serue the Venison forth vpon the sauce when it is roasted enough,

To roast fresh Sturgeon. If you will roast a peece of fresh Sturgeon which is a dainty dishe, you shall first stop it all ouer with cloues, then

then spit it, and let it roast at great leasure, plying it continually with basting, which will take away the hardnesse: then when it is enough, you shall draw it, and serue it vp on Venison sauce with salt onely throwne ouer it.

The roasting of all sorts of meates differeth nothing but in the fires, speed and leasure as is before said, except these compound dishes, of which I haue giuen you sufficient presidents, and by them you may performe any worke whatsoeuer: but for the ordering, preparing and trussing your meates for the spit or table, in that there is much difference: for in all ioynts of meate except a shoulder of Mutton, you shall crush and breake the bones well, from Pigges and Rabbets you shall cut off the frete before you spit them, and the heads when you serue them to table, and the Pigge you shall chine, and diuide into two parts; Capons, Pheasants, Chickens and Turkies you shall roast with the Pinions foulded vp, and the legges extended; Hens, Stock-doues, and Houf-doues, you shall roast with the pinions foulded vp, and the legges cut off by the knees, and thrust into the bodies: Quales, Partridge, and all sorts of small birds shall haue their pinions cut away, and the legges extended: all sorts of Waterfowle shall haue their pinions cut away, and their legges turned backward: Wood-cocks, Snipes and Stints shall be roasted with their heads and necks on, and their legges thrust into their bodies, and Shouelers and Bitterns shall haue no necks but their heads onely.

Take a Cowes Vdder, and first boile it wel: then sticke it thick all ouer with Cloues: then when it is cold, spit it, and lay it to the fier, and apply it very well with basting of sweete butter, and when it is sufficiently roasted, and browne, then dredge it, and draw it from the fire, take vinegar and Butter, and put it on a Chaffing-dish and coales and

*Ordering of
meates to be
roasted.*

*To roast a
Calues Vd-
der.*

and boile it with white-bread crums, till it be thick : then put to it good store of *suger* and *cinamon*, and putting it in a cleane dish, lay the *Comes Vdder* therein, and trim the sides of the dish with *suger*, and so serue it vp.

To roast a
Fillet of
Veale.

Take an excellent good legge of Veale, and cut the thick part thereof a handfull and more from the Knuckle : then take the thick part (which is the fillet) and pierce it in euery part all ouer with *strawberry-leaues*, *violet-leaues*, *sorrell*, *spinage*, *endive* and *succorie* grossely chopt together, and good store of *onyons* : then lay it to the fire and roast it very sufficiently and browne, casting good store of *salt* vpon it, and basting it well with sweete *butter* : then take of the former hearbs much finer chopt then they were for piercing, and put them into a Pipkin with *vinegar*, and cleane washt *currants*, and boyle them wel together: then when the hearbs are sufficiently boyld and soft, take the yelkes of foure very hard boyld *egges*, and shred them very small, and put them into the Pipkin also with *suger* and *cinamon*, and some of the graue which drops from the Veale, and boyle it ouer againe, and then put it into a cleane dish, & the fillet being dredgd and drawne, lay vpon it, and trim the side of the dish with *suger*, & so serue it vp.

OF
Sauces, and
first for a
roast Capon
or Turkie.

To make an excellent sauce for a roast *Capon*, you shall take *onions*, and hauing sliced and pilled them, boile them in faire water with *pepper*, *salt*, and a few bread-crummes : then put vnto it a spoonefull or two of *Claret-wine*, the iuyce of an *orange*, and three or foure slices of a *lemmon* pill; all these shred together, and so powre it vpon the *Capon* being broake vp.

Sauce for a
Hen or Pul-
let.

To make sauce for an old *Hen* or *Pullet*, take a good quantitie of *beere* and *salt*, and mixe them well together with a few fine bread-crummes, and boile them on a chafing-dish and coales, then take the yelks of three or foure hard

hard Eggs, and being shred small, put it to the Beere, and boile it also: then the Hen being almost enough, take three or fowre spoonefull of the graue which comes from her and put it to also, and boile altogether to an indifferent thicknesse: which done, suffer it to boile no more, but only keepe it warme on the fire, and put into it the iuyce of two or three *Orenge*s, & the slices of *Lemmon* pills shred small, and the slices of *Orenge*s also hauing the vpper rine taken away: then the Henne beeing broken vp, take the bawnes thereof, and shredding them small, put it into the sauce also; and stirring all well together, put it hot into a cleane warme dish, and lay the Henne (broke vp) in the same.

The sauce for Chickens is diuers, according to mens taste: for some will onely haue *Butter*, *Veriuyce*, and a little *Parsely* rolled in their bellies mixt together: others will haue *Butter*, *Veriuyce* and *Sugar* boyld together with toasts of bread: and others will haue thicke Syppets with the iuyce of *Sorrell* and *Sugar* mixt together.

The best sauce for a Pheasant, is *Water*, *Onions* slic't, *Pepper* and a little *Salt* mixt together, and but stewed vpon the Coales, and then powred vpon the Pheasant or Partridge being broken vp, and some will put thereto the iuyce or slices of an *Orenge* or *Lemmon*, or both: but it is according to taste, and indeed more proper for a Pheasant then Partridge.

Sauce for a Quaille, Raile, or any fat big bird, is *Claret Wine* and *Salt* mixt together with the graue of the Bird, and a few fine bread-crummes well boild together, and either a *Sage*-leafe, or *Bay*-leafe crusht among it according to mens taste.

The best sauce for Pigeons, Stockdoves, or such like, is *Vinegar* and *Butter* melted together, and *Parsely* roasted in their

Sauce for
Chickens.

Sauce for a
Pheasant or
Partridge.

Sauce for a
Quaille,
Raile, or
big bird.

Sauce for
Pigeons.

their bellies, or *vine-leaves* roasted and mixed well together.

*A generall
saunce for
wild Fowle.*

The most generall saunce for ordinarie wild fowle roasted, as *Duckes*, *Mallard*, *Widgen*, *Tele*, *Snipe*, *Sheldrake*, *Plovers*, *Pulers*, *Guls*, and such like, is onely *mustard* and *vinegar*, or *mustard* and *verinyce* mixt together, or else an *onion*, *water* and *Pepper*, and some (especially in the Court) vse onely *butter* melted, and not any thing else.

*Saunce for
greene geese.*

The best saunce for greene *Geese* is the iuyce of *sorrel* and *suger*, mixt together with a few scalded *feberries*, and serued vpon sippets; or els the belly of greene *Goose* filld with *Feberries*, and so roasted, and then the same mixt with *verinyce*, *butter*, *suger* and *cinamon*, and so serued vpon sippets.

*Saunce for a
stubble goose.*

The same for a stubble *Goose* is diuers, according to mens minds, for some will take the pap of roasted *apples*, and mixing it with *vinegar*, boyle them together on the fire with some of the graue of the *Goose*, and a few *barberries* and bread-crummes, and when it is boyled to a good thicknesse, season it with *suger* and a little *cinamon*, and so serue it vp; some will adde a little *mustard* and *onions* vnto it, and some will not rost the *apples*, but pare them and slice them; and that is the neerer way, but not the better. Others will fill the belly of the *Goose* full of *onions* shred, and *oate-meale* Groats, and beeing roasted enough, mixe it with the graue of the *Goose*, and sweete hearbs well boild together, and seasoned with a little *verinyce*.

*See for a
Swan, Bitter,
Shoueler, or
large Fowle.*

To make a saunce for a *Swan*, *Bitter*, *Shoueler*, *Herne*, *Crane*, or any large foule, take the blood of the same foule, & being stird wel, boile it on the fire, then when it comes to be thick, put vnto it *vinegar* a good quantitie, with a few fine bread-crummes, and so boile it ouer againe: then
being

being come to good thicknesse, season it with *Sugar* and *Cinamon*, so as it may taste prettie and sharpe vpon the *Cinamon*, and then serue it vp in Saucers as you doe *Mustard*: for this is called a *Chauder* or *Gallantine*, and is a sauce almost for any Fowle whatsoever.

To make sauce for a Pigge, some take *Sage* and roast it in the belly of the Pig, then boyling *Veriuyce*, *Butter* and *Currants* together, take and chop the *Sage* small, and mixing the braines of the Pig with it, put all together, and so serue it vp.

Sauce for a Pig.

To make a sauce for a Ioynt of Veale, take all kind of sweet Pot-hearbs, and chopping them very small with the Yelkes of two or three Egges, boyle them in *Vinegar* and *Butter*, with a few bread-crummes, and good store of *Currants*; then season it with *Sugar* and *Cinamon*, and a Cloue or two crusht, and so powre it vpon the Veale, with the slices of *Oreniges* and *Lemons* about the dish.

Sauce for Veale.

Take *Oreniges* and slice them thin, and vnto them *White Wine* and *Rose-water*, the powder of *Mace*, *Ginger* and *Sugar*, and set the same vpon a Chaffing-dish and coales, and when it is halfe boyled, put to it a good lumpe of *Butter*, and then lay good store of sippets of fine white bread therein, and so serue your Chickens vpon them, and trim the sides of the dish with *Sugar*.

Additions
vnto Sauces.
Sops for Chickens.

Take faire water and set it ouer the fire, then slice good store of *Onions* and put into it, and also *Pepper* and *Salt*, and good store of the grauy that comes from the Turkie, and boyle them very well together: then put to it a few fine crummes of grated bread to thicken it; a very little *Sugar* and some *Vinegar*, and so serue it vp with the Turkey: or otherwise, take grated white bread and boile it in *White-wine* till it bee thicke as a *Gallantine*, and in the boyling

Sauce for a Turkie.

put in good store of *Sugar* and *Cinamon*, and then with a little *Turnesole* make it of a high *Murrey* colour, and so serue it in Saucers with the Turkey in manner of a *Gallantine*.

*The best
Gallantine.*

Take the blood of a Swan, or any other great Fowle, and put it into a dish; then take stewed *Prunes* and put them into a strainer, and straine them into the blood; then set it on a Chaffing-dish and Coales, and let it boyle, euer stirring it till it come to be thicke, and season it very well with *Sugar* and *Cinamon*, and so serue it in Saucers with the Fowle: but this Sauce must be serued cold.

*Sauce for a
Mallard.*

Take good store of *Onions*, pill them, and slice them, and put them into *Vinegar*, and boyle them very well till they be tender; then put into it a good lumpe of sweete *Butter*, and season it well with *Sugar* and *Cinamon*, and so serue it vp with the Fowle.

OF
Carbonados.

*What is to
be carbona-
doed.*

Charbonados, or *Carbonados*, which is meate broiled vpon the Coales (and the inuention thereof first brought out of *France*, as appeares by the name) are of diuers kinds according to mens pleasures: for there is no meate either boiled or roasted whatsoeuer, but may afterwards bee broiled, if the Master thereof be disposed, yet the generall dishes for the most part which are vsed to be Carbonadoed, are a Breast of Mutton halfe boyled, a Shoulder of Mutton halfe roasted, the Leggs, Wings, and Carkases of Capon, Turkie, Goose, or any other Fowle whatsoeuer, especially Land-Fowle. And lastly, the vppermost thick skinne which couereth the ribbes of Beefe, and is called (being broyled) the skin of Court Goose, and is indeed a dish vsed most for wantonnesse, sometimes to please appetite: to which may also be added the broyling of Pigs heads, or the braines of any Fowle whatsoeuer after it is roasted and drest.

Now

Now for the manner of Carbonadoing, it is in this sort; you shall first take the meate you must Carbonadoe, and scorch it both aboue and below, then sprinkle good store of *Salt* vpon it; and baste it all ouer with sweet *Butter* melted; which done, take your broiling-yrone, I doe not meane a Grid-yrone (though it be much vsed for this purpose) because the smoake of the coales, occasioned by the dropping of the meate, will ascend about it, and make it stinke; but a plate Iron made with hookes and pricks, on which you may hang the meate, and set it close before the fire, and so the Plate heating the meate behind, as the fire doth before, it will both the sooner, and with more neatnesse bee readie: then hauing turned it, and basted it till it be very browne, dredge it, and sende it vp with *Vinegar* and *Butter*.

The manner of carbonadoing.

Touching the toasting of Mutton, Venison, or any other Ioynt of meate, which is the most excellent of all Carbonadoes, you shall take the fattest and largest that can possibly be got (for leane meate is losse of labour, and little meate not worth your time,) and hauing scorched it, and cast salt vpon it, you shall set it on a strong forke, with a dripping pan vnderneath it, before the face of a quick fire, yet so farre off, that it may by no meanes scorch, but roast at leasure; then with that which fallles from it, and with no other basting, see that you baste it continually, turning it euer and anon many times, and so oft, that it may soake and browne at great leasure, and as oft as you baste it, so oft sprinkle *Salt* vpon it, and as you see it roast so scorch it deeper and deeper, especially in the thickest and most fleshy parts where the blood most resteth: and when you see that no more blood droppeth from it, but the graty is cleere and white, then shall you serue it vp either with Venion sauce, or with *Vinegar*, *Pepper* and *Su-*

Of the toasting of Mutton.

Additi-
onsvnto Carbo-
nados.A rasber of
Mutton or
Lambe.To carbona-
do Tongues.Additi-
onsfor dressing
of Fish.To souce any
fresh fish.

gar, Cinamon, and the iuyce of an Orange mixt together, and warmed with some of the graue.

Take Mutton or Lambe that hath been either roasted, or but parboild, and with your knife scotch it many waies; then lay it in a deepe dish, and put to it a pint of White Wine, and a little whole Mace, a little slic't Nutmeg, and some Sugar, with a lump of sweet Butter, and stew it so till it be very tender: then take it forth, and browne it on the Grid-iron, and then laying Sippets in the former broth serue it vp.

Take any tongue, whether of Beefe, Mutton, Calues, red Deare, or Fallow, and being well boyld, pill them, cleaue them, and scotch them many waies; then take three or foure Eggs broken, some Sugar, Cinamon and Nutmeg, and hauing beaten it well together, put to it a Lemon cut in thin slices, and another cleane pild, and cut into little foure-square bits, and then take the tongue and lay in it; and then hauing melted good store of Butter in a Frying-pan, put the Tongue and the rest therein, and so frie it browne, and then dish it, and scrape Sugar vpon it, and serue it vp.

Take any fresh fish whatsoeuer, as Pike, Breame, Carp, Barbel, Cherein, and such like, and draw it, but scale it not; then take the Liuer and the refuse, and hauing opened it, wash it; then take a pottle of faire water, a pretty quantitie of white wine, good store of Salt, and some Vinegar, with a little bunch of sweet Hearbs, and set it on the fier, and as soone as it begins to boyle, put in your fish, and hauing boild a little, take it vp into a faire vessell, then put into the liquor some grosse Pepper, & slit Ginger; and when it is boyled well together with more Salt, let it by to coole, and then put your fish into it, and when you serue it vp, lay Fenell there vpon.

To

To boyle small Fish, as Roches, Daces, Gudgeon or Flounders, boyle White wine and water together with a bunch of choise Hearbs, and a little whole *Mace*: when all is boyled wel together, put in your fish, and skum it well: then put in the soale of a Manchet, a good quantitie of sweet Butter, and season it with *Pepper* and *Verinyce*, and so serue it in vpon Sippets, and adorne the sides of the dish with Sugar.

To boyle
small fish.

First, draw your fish, and either split it open in the back, or ioyfit it in the back, and trusse it round, then wash it cleane, and boyle it in water and salt, with a bunch of sweete Hearbs: then take it vp into a large dish, and powre vnto it *Veriuyce*, *Nutmeg*, *Butter* and *Pepper*; and letting it stew a little, thicken it with the yelkes of Egges: then hot remoue it into another dish, and garnish it with slices of *Orenge*s and *Lemons*, *Barberies*, *prunes* and *Suger*, and so serue it vp.

To boyle a
Garnet or
Rochet.

After you haue drawne, washt and scalded a faire large Carpe, season it with *Pepper*, *Salt* and *Nutmeg*, and then put it into a coffin with good store of sweet *Butter*, and then cast on *Raysins* of the Sunne, the iuyce of *Lemons*, and some slices of *Orenge* pills; and then sprinkling on a little *Vinegar*, close it vp and bake it.

To bake a
Carpe.

First, let your Tench blood in the tayle, then scower it, wash it and scald it: then hauing dried it, take the fine crummes of bread, sweete Creame, the yelkes of Egges, *Currants* cleane washt, a few sweete Hearbs chopt small, season it with *Nutmegs* and *Pepper*, and make it into a stiffe paste, and put it into the belly of the Tench: then season the fish on the outside with *Pepper*, *Salt* and *Nutmeg*, and so put it into a deepe coffin with sweete *Butter*, and so close vp the pie and bake it: then when it is enough, draw it, and open it, and put into it a good piece of a preserued

To bake a
Tench.

Orenge

To stew a
Trout.

Orengemint; then take *Vinegar*, *Nutmeg*, *Butter*, *Suger*, and the yelke of a new laid Egge, and boyle it on a Chafsing-dish and coales, alwaies stirring it to keepe it from curding; then powre it into the pie, shake it well, and so serue it vp.

To bake
Eeles.

Take a large Trout, faire trimd, and wash it, and put it into a deepe pewter dish, then rake halfe a pint of sweet Wine, with a lumpe of Butter, a little whole *Mace*, *Parsely*, *Sauorie* and *Time*, mince them all small, and put them into the Trouts belly, & so let it stew a quarter of an houre: then minse the yelke of an hard Egge, and strow it on the Trout, and laying the Hearbs about it, and scraping on *Suger*, serue it vp.

Of
The pasterie
and baked
meates.

After you haue drawne your Eeles, chop them into small pieces of three or foure inches, and season them with *Pepper*, *Salt* and *Ginger*, and so put them into a coffin with a good lumpe of Butter, great *Ray sins*, *Onions* small chopt, and so close it, bake it, and serue it vp.

Next to these already rehearsed, our *English Housewife* must be skilfull in Pasterie, and know how and in what manner to bake all sorts of meate, and what Paste is fit for euerie meate, and how to handle and compound such Pastes: As for example, red Deere Venison, wilde Boare, Gammons of Bacon, Swannes, Elkes, Porpas, and such like standing dishes, which must bee kept long, would be bak't in a moist, thicke, tough, course, and long lasting crust, and therefore of all other your *Rie* paste is best for that purpose: your Turkie, Capon, Pheasant, Partridge, Veale, Peacocks, Lambe, and all sorts of water-fowle which are to come to the table more then once (yet not many dayes) would be bak't in a good white crust, somewhat thick; therefore your *Wheate* is fit for them: your Chickens, Calues-feet, Oliues, Potatoes, Quinces, Fallow Deere

deere and such like, which are most commonly eaten hot, would be in the finest, shortest & thinnest crust, therefore your fine wheat flower which is a litte baked in the ouen before it be kneaded is the best for that purpose.

To speake then of the mixture and kneading of pastes, you shall vnderstand that your Rie paste would be kneaded only with hot water and a little *butter*, or sweet seame and *Rie* flower very finely sifted, and it would bee made tough and stiffe that it may stand well in the raising, for the coffin thereof must euer be very deepe : your course wheat crust would be kneaded with hot water, or Mutton broth and good store of *butter*, and the paste made stiffe and tough because that coffin must bee deepe also ; your fine wheat crust must be kneaded with as much *butter* as water, and the paste made reasonable lythe and gentle, into which you must put three or fowre eggs or more according to the quantity you blend together, for they will giue it a sufficient stiffening.

Of the mixture of pasts

Now for the making of puffed-past of the best kind, you shall take the finest wheat flowre after it hath been a little bak't in a pot in the ouen, and blend it well with egges whites and yelkes altogether, then after the past is well kneaded, roule out a part thereof as thin as you please, and then spread cold sweet butter ouer the same, then vpon the same butter role another leafe of the paste as before, and spread it with butter also ; and thus role leafe vpon leafe with butter betweene till it be as thick as you thinke good: and with it either coner any bak't meate, or make pastie for Venison, Florentine, Tart or what dish else you please and so bake it : there be some that to this past vse sugar, but it is certaine it will hinder the rising thereof ; and therefore when your puffed past is bak't, you shall dissolve sugar into Rose-water, and drop it into the paste as

Of puffed past

*Of baking
Red-deere,
or Fallow,
or any thing
to keepe sold.*

much as it will by any meanes receiue, and then set it a little while in the ouen after and it will be sweet enough.

When you bake red Deere, you shall first parboile it and take out the bones, then you shall if it be leane larde it, if fat saue the charge, then put it into a presse to squeeze out the blood; then for a night lay it in a meare sauce made of Vinegar, small drinke and salt, and then taking it forth, season it well with Pepper finely beaten, and salt well mixt together, and see that you lay good store thereof, both vpon and in euery open and hollow place of the Venison; but by no meanes cut any slashes to put in the pepper, for it will of it selfe sinke fast enough into the flesh, and be more pleasant in the eating: then hauing raised the coffin, lay in the bottome a thicke course of butter, then lay the flesh thereon and couer it all ouer with butter, and so bake it as much as if you did bake great browne bread; then when you draw it, melt more butter with three or fowre spoonefull of Vinegar, and twice so much Claret wine, and at a vent hole on the toppe of the lidde powre in the same till it can receiue no more, and so let it stand and coole; and in this sort you may bake Fallow-deere, or Swanne, or whatsoever else you please to keepe colde, the meare sauce only being left out which is only proper to red Deere: And if to your meare sauce you adde a little Turnesole, and therein steepe beefe, or Ramme mutton; you may also in the same manner take the first for Red-deere Venison, and the latter for Fallow, and a very good iudgement shall not be able to say otherwise, then that it is of it selfe perfect Venison, both in taste, colour, and the manner of cutting.

*To bake
beefe, or
mutton for
Venison.*

*To bake a
Custarde
or Dowset.*

To bake an excellent Custard or Dowset; you shall take good store of egges, and putting away one quarter of the whites, beate them exceeding well in a bason, and then

then mixe with them the sweetest and thickest creame you can get, for if it be any thing thinne, the Custard will be wheyish; then season it with salt, sugar, cinamon, cloues, mace, and a little Nutmegge; which done raise your coffins of good tough wheate paste, being the second sort before spoke of, and if you please raise it in pretty workes, or angular formes, which you may doe by fixing the upper part of the crust to the nether with the yelks of egges: then when the coffins are ready, strow the bottomes a good thicknesse ouer with Currants and Sugar; then set them into the Ouen, and fill them vp with the confecti- on before blended, and so drawing them, adorne all the toppes with Carraway Cumfers, and the slices of Dates prickt right vp, and so serue them vp to the table.

To make an excellent Oliue pie; take sweet hearbs as Violet leaues, Strawberry leaues, Spinage, Succorie, Endiue, Time and Sorrell, and chop them as small as may be, and if there be a Scallion or two amongst them it will giue the better taste, then take the yelks of hard egges with Currants, Cinamon, Cloues and Mace, and chop them amongst the hearbes also; then hauing cut out long oliues of a legge of Veale, roule vp more then three parts of the hearbs so mixed within the Oliues, together with a good deale of sweet butter; then hauing raised your crust of the finest and best paste, strowe in the bottome the remainder of the hearbes, with a few great Raysins hauing the stones pickt out; then put in the Oliues and couer them with great Raysins and a few Pruens; then ouer all lay good store of *butter* and so bake them; then being sufficiently bak't, take Claret wine, Sugar, Cinamon, and two or three spoonefull of wine Vinegar and boile them together, and then drawing the pie, at a vent in the top of the lid put in the same, and then set it into the Ouen

*To bake an
Oliue pyc.*

againe a little ſpace, and ſo ſerue it forth.

*To make a
Marrow-
bone Pie.*

To bake the beſt Marrow-bone pie, after you haue mixt the cruſts of the beſt ſort of paſtes, and raiſed the coffin in ſuch manner as you pleaſe ; you ſhall firſt in the bottome thereof lay a courſe of marrow of Beeſe mixt with currants ; then vpon it a lay of the ſoales of Arti- chokes, after they haue been boiled, and are diuided from the thistle ; then couer them ouer with marrow, currants, and great rayſons, the ſtones pickt out ; then lay a courſe of Potatos cut in thick ſlices, after they haue been boyled ſoft, and are cleane pild ; then couer them with marrow, currants, great rayſons, ſuger and cinamon : then lay a layer of candied Eringo roots mixt very thicke with the ſlices of Dates : then couer it with marrow, currants, great rayſins, ſuger, cinamon and dates, with a few dam- maske prunes, and ſo bake it : and after it is bakt power into it as long as it will receiue it white-wine, roſewater, ſuger, cinamon, and vinegar, mixt together, and candie all the couer with roſewater and ſuger only ; and ſo ſet it in- to the ouen a little, and after ſerue it forth.

*To bake a
Chicken pie.*

To bake a chicken pie, after you haue truſt your chic- kins, broken their legges and breſt-bones, and rayſed your cruſt of the beſt paſte, you ſhall lay them in the cof- fin cloſe together with their bodies full of butter : Then lay vpon them, and vnderneath them, currants, great ray- ſins, pruens, cinamon, ſager, whole mace and ſalt : then cou- er all with great ſtore of butter, and ſo bake it ; after powre into it the ſame liquor you did in your marrow bone Pie with the yelkes of two or three egges beaten a- mongſt it, and ſo ſerue it forth.

*Additi-
ons
to the Pa-
ſterie.*

To make good *Red-Deere* Veniſon of *Hares*, take a *Hare* or two, or three, as you can or pleaſe, and picke all the fleſh from the bones ; then put it into a mortar either of wood

wood or stone, and with a wooden pestle let a strong person beate it exceedingly, and euer as it is beating, let one sprinckle in *vinegar* and some *salt*; then when it is sufficiently beaten, take it out of the mortar, and put it into boyling water and parboyle it: when it is parboyld, take it and lay it on a table in a round lumpe, and lay a board ouer it, and with weights presse it as hard as may be: then the water being prest out of it, season it well with *pepper* and *salt*: then lard it with the fat of *bacon* so thicke as may be: then bake it as you bake other *Red Deare*, which is formerly declared.

Venison of Harts.

Take a *Hare* and picke of all the flesh from the bones, and onely reserue the head, then parboyle it well: which done, take it out and let it coole, as soone as it is cold, take at least a pound and a halfe of *raysins* of the Sunne, and take out the stones: then mixe them with a good quantitie of Mutton suet, and with a sharpe shredding knife shred it as small as you would doe for a Chewet: then put to it *currants* and whole *raysins*, *cloues* and *mace*, *cinnamon* and *salt*: then hauing rayfed the coffin long-wise to the proportion of a *Hare*, first, lay in the head, and then the aforefaid meate, and lay the meate in the true portion of a *Hare*, with necke, shoulders and leggs, and then couer the coffin and bake it as other bak't meates of that nature.

To bake a Hare pie.

Take a Gammon of Bacon and onely wash it cleane, and then boyle it on a soft gentle fire, till it be boyled as tender as is possible, euer and anon fleeting it cleane, that by all meanes it may boyle white: then take off the sward, and serse it very well with all manner of sweet and pleasant serffing hearbs: then strow store of *pepper* ouer it, and pricke it thick with *cloues*: then lay it into a coffin made of the same proportion, and lay good store of *butter*

A Gammon of Bacon pie.

round about it, and vpon it, and strow *pepper* vpon the *butter*, that as it melts, the *pepper* may fall vpon the *Bacon*: then couer it, and make the proportion of a *Piggs* head in paste vpon it, and then bake it as you bake *Red Deere*, or things of the like nature, onely the Paste would bee of Wheate meale.

*A Herring
pie.*

Take white pickled *Herrings* of one nights watering, and boyle them a little: then pill of the skin, and take onely the backs of them, and picke the fish cleane from the bones, then take good store off *raysins* of the Sunne, and stone them, and put them to the fish: then take a *warden* or two, and pare it, and slice it in small slices from the chore, and put it likewise to the fish: then with a very sharpe shredding knife shred all as small and fine as may be: then put to it good store of *currants*, *suger*, *cinamon*, *flic't dates*, and so put it into the coffin with good store of very sweete *butter*, and so couer it, and leaue only a round vent-hole on the top of the lid, and so bake it like pies of that nature: When it is sufficiently bak't, draw it out, and take *Clarret-wine* and a little *veriuycce*, *suger*, *cinamon*, and sweete *butter*, and boyle them together; then put it in at the vent-hole, and shake the pie a little, and put it againe into the Ouen for a little space, and so serue it vp, the lid being candied ouer with *suger*, and the sides of the dish trimmed with *Suger*.

A Ling pie.

Take a Iole of the best *Ling* that is not much watred, and is well sodden and cold, but whilest it is hot take off the skin, & pare it cleane vnderneath, and picke out the bones cleane from the fish: then cut it into grosse bits and let it lie: then take the yelks of a dozen *eggs* boyld exceeding hard, and put them to the fish, and shred all together as small as is possible: then take all manner of the best and finest pot-herbs, and chop them wonderfull small, and

and mixe them also with the fish; then season it with *pepper*, *cloues* and *mace*, and so lay it into a coffin with great store of sweet *butter*, so as it may swim therein, and then couer it, and leaue a vent-hole open in the top (when it is bak't, draw it, and take *veriuice*, *suger*, *cinamon* and *butter*, and boyle them together, and first with a feather annoynt all the lid ouer with that liquor, and then scrape good store of *suger* vpon it; then powre the rest of the liquor in at the vent-hole, and then set it into the Ouen againe for a very little space, and then serue it vp as pies of the same nature; and both these pies of fish before rehearsed, are especiall Lenten dishes.

Take a pint of the sweetest and thickest *Creame* that can be gotten, and set it on the fire in a very cleane scowred skillett, and put into it *suger*, *cinamon*, and a *nutmeg* cut into foure quarters, and so boyle it well: then take the yelkes of foure *eggs*, and take off the filmes, and beate them well with a little sweete *creame*: then take the foure quarters of the *nutmeg* out of the *creame*, then put in the *egges*, and stirre it exceedingly, till it be thicke: then take a fine Manchet, and cut it into thin shiues, as much as will couer a dish-bottome, and holding it in your hand, powre halfe the *creame* into the dish: then lay your bread ouer it, then couer the bread with the rest of the *creame*, and so let it stand till it be cold: then strow it ouer with *caraway* Comfets, and prick vp some *cinamon* Comfets, and some slic't *dates*; or for want thereof, scrape all ouer it some *suger*, and trim the sides of the dish with *suger*, and so serue it vp.

A Foole.

Take a pint of the best and thickest *creame*, and set it on the fire in a cleane skillett, and put into it *suger*, *cinamon*, and a *nutmeg* cut into foure quarters, and so boyle it well: then

A Trifle.

then put it into the dish you intend to serue it in, and let it stand to coole till it be no more then luke-warme : then put in a spoonefull of the best earring, and stirre it well about, and so let it stand till it be cold, and then strow *suger* vpon it, and so serue it vp, and this you may serue either in dish, glasse, or other plate.

*A Calues
foote pie.*

Take *Calues* feete well boyld, and picke all the meate from the bones : then being cold shred it as small as you can, then season it with *cloues* and *mace*, and put in good store of *currants*, *rayssins* and *prunes* : then put it into the coffin with good store of sweete *butter*, then breake in whole sticks of *cinamon*, and a *nutmeg* slic't into foure quarters, and season it before with *salt* : then close vp the coffin, and onely leaue a vent-hole. When it is bak't, draw it, and at the vent-hole put in the same liquor you did in the *Ling-pie*, and trim the lid after the same manner, and so serue it vp.

Oyster pie.

Take of the greatest *oysters* drawne from the shells, and parboyle them in *veriuince* : then put them into a cullander, and let all the moysture run from them, till they bee as drie as is possible : then raise vp the coffin of the pie, and lay them in : then put to them good store of *currants* and fine powdred *suger*, with whole *mace*, whole *cloues*, whole *cinamon*, and a *nutmeg* slic't, *dates* cut, and good store of sweete *butter* : then couer it, and onely leaue a vent-hole : when it is bak't, then draw it, and take *White-wine*, and *White-wine vinegar*, *suger*, *cinamon*, and sweete *butter*, and melt it together ; then first trim the lid therewith, and candie it with *suger* ; then powre the rest in at the vent-hole, and shake it well, and so set it into the ouen againe for a little space, and so serue it vp, the dish-edges trimd with *suger*. Now some vse to put to this pie *onions* sliced

sliced and shred, but that is referred to discretion, and to the pleasure of the taste.

Take strong *ale*, and put to it of *wine-vinegar* as much as will make it sharpe: then set it on the fier, and boyle it well, and skum it, and make of it a strong brine with *bay-salt*, or other *salt*: then take it off, and let it stand till it be cold, then put your Venison into it, and let it lie in it full twelue howers: then take it out from that mearsaue, and presse it well; then parboyle it, and season it with *pepper* and *salt*, and bake it, as hath been before shewed in this Chapter.

*Toreconer
Venison that
is tainted.*

Take the brawnes and wings of *Capons* and *Chickens* after they haue been roasted, and pull away the skin; then shred them with fine Mutton suet very small; then season it with *cloues*, *mace*, *cinamon*, *suger* and *salt*: then put to *raysins* of the Sunne and *currants*, and slic't *dates*, and *orange pills*, and being well mixt together, put it into small coffins made for the purpose, and strow on the top of them good store of *caraway* Comfets: then couer them, and bake them with a gentle heate, and these Chewets you may also make of roasted Veale, seasoned as before shewed, and of all parts the loyne is the best.

*A Chewet
pie.*

Take a Leg of Mutton, and cut the best of the best flesh from the bone, and parboyle it well: then put to it three pound of the best Mutton suet, and shred it very small: then spred it abroad, and season it with *pepper* and *salt*, *cloues* and *mace*: then put in good store of *currants*, great *raysins* and *prunes* cleane washt and pickt, a few *dates* slic't, and some *orange pills* slic't: then being all well mixt together, put it into a coffin, or into diuers coffins, and so bake them: and when they are serued vp open the liddes, and strow store of *suger* on the top of the meate, and vpon the lid. And in this sort you may

*A minc't
pie.*

also bake Beefe or Veale; onely the Beefe would not be parboyld, and the Veale will aske a double quantitie of liuet.

*A Pippen
pie.*

Take of the fairest and best *Pippins*, and pare them, and make a hole in the top of them; then prick in each hole a *clone* or two, then put them into the coffin, then breake in whole sticks of *cinamon*, and slices of *orange* pills and *dates*, and on the top of euery *pippen* a little piece of sweete *butter*: then fill the coffin, and couer the *Pippins* ouer with *suger*; then close vp the pie, and bake it, as you bake pies of the like nature, and when it is bak't, anoint the lid ouer with store of sweete *butter*, and then strow *suger* vpon it a good thicknesse, and set it into the ouen againe for a little space, as whilst the meate is in dishing vp, and then serue it.

*A Warden
pie, or quince
pie.*

Take of the fairest and best *Wardens*, and pare them, and take out the hard chokes on the top, and cut the sharp ends at the bottome flat; then boyle them in *White wine* and *suger*, vntill the sirrup grow thick: then take the *wardens* from the sirrup into a cleane dish, & let them coole; then set them into the coffin, and prick *cloues* in the tops, with whole sticks of *cinamon*, and great store of *suger*, as for *Pippins*; then couer it, and onely reserve a vent-hole, so set it in the ouen and bake it: when it is bak't, draw it forth, and take the first sirrup in which the *Wardens* were boyld, and taste it, and if it be not sweet enough, then put in more *suger* and some *rosewater*, & boyle it againe a little, then powre it in at the vent-hole, and shake the pie wel; then take sweet *butter* and *rose-water* melted, and with it anoynt the pie-lid all ouer, and then strow vpon it store of *suger*, and so set it into the ouen againe a little space, and then serue it vp. And in this manner you may also bake *Quincees*.

Take

Take the best and sweetest worthe, and put to it good store of *suger*; then pare and chore the *Quinces* cleane, and put them therein, and boile them till they grow tender: then take out the *quinces* and let them coole, and let the pickle in which they were boyld, stand to coole also; then straine it through a raunger siue, then put the *quinces* into a sweete earthen pot, then powre the pickle or sirrup vnto them, so as all the *quinces* may be quite couered all ouer; then stop vp the pot close, and set it in a dry place, and once in six or seuen weekes looke vnto it; and if you see it shrinke, or doe begin to hoare or mould, then poure out the pickle or sirrup, and renewing it, boile it ouer againe, and as before put it to the *quinces* being cold, and thus you may preserue them for the vse of baking, or otherwise all the yeere.

To preserue
quinces to
bake all the
yeere.

Take *Pippins* of the fairest, and pare them, and then diuide them iust in the halfes, and take out the chores cleane: then hauing rold out the coffin flat, and raysde vp a small verdge of an inch, or more high, lay in the *Pippins* with the hollow side downeward, as close one to another as may be: then lay here and there a *cloue*, and here and there a whole stick of *cinamon*, and a little bit of *butter*: then couer all cleane ouer with *suger*, and so couer the coffin, and bake it according to the manner of Tarts; and when it is bak't, then draw it out, and hauing boyld *butter* and *rose-water* together, anoynt all the lid ouer therewith, and then scrape or strow on it good store of *suger*, and so set it in the ouen againe, & after serue it vp.

A *Pippin*
Tart.

Take greene *Apples* from the tree, and coddle them in scalding water without breaking; then pill the thin skin from them, and so diuide them in halfes, and cut out the chores, and so lay them into the coffin, and doe in euery thing as you did in the *Pippin-tart*; and before you co-

A *codlin*
Tart.

uer it when the *suger* is cast in, see you sprinkle vpon it good store of *rose-water*, then close it, and doe as before shewed.

*A Codling
pie.*

Take *Codlins* as before-said, and pill them, and deuide them in halfes, and chore them, and lay a leare thereof in the bottome of the pie: then scatter here and there a *cloue*, and here and there a peece of whole *cinamon*; then couer them all ouer with *suger*, then lay another leare of *Codlins*, and doe as before-said, and so another, till the coffin be all filled; then couer all well with *Suger*, and here and there a *Cloue* and a *Cinamon-stick*, and if you will a slic't *Orange* pill and a *Date*; then couer it, and bake it as the pies of that nature: when it is bak't, draw it out of the ouen, and take of the thickest and best *Creame* with good store of *Suger*, and giue it one boyle or two on the fire: then open the pie, and put the *Creame* therein, and mash the *Codlins* all about; then couer it, and hauing trimd the lid (as was before shewed in the like pies and tarts) set it into the ouen againe for halfe an hower, and so serue it forth.

*A Cherrie
Tart.*

Take the fairest *Cherries* you can get, and picke them cleane from leaues and stalkes; then spread out your coffin as for your *Pippin-tart*, and couer the bottome with *Suger*; then couer the *Suger* all ouer with *Cherries*, then couer those *Cherries* with *Sugar*, some sticks of *Cinamon*, and here and there a *Cloue*; then lay in more cherries, and so more *Suger*, *Cinamon* and *cloues*, till the coffin be filled vp; then couer it, and bake it in all points as the *codling* and *pipping tart*, and so serue it; and in the same manner you may make *Tarts* of *Gooseberries*, *Strawberries*, *Rasberries*, *Bilberries*, or any other *Berrie* whatsoeuer.

*A Rice
Tart.*

Take *Rice* that is cleane picked, and boyle it in sweete
Creame

Creame, till it bee very soft; then let it stand and coole, and put into it good store of *Cinamon* and *suger*, and the yelkes of a couple of *egges*, *currants*, stirre and beate all well together: then hauing made the coffin in the manner before-said for other tarts, put the *Rice* therein, and spread it all ouer the coffin; then breake many little bits of sweete *butter* vpon it all ouer, and scrape some *suger* ouer it also; then couer the tart, and bake it, and trim it in all points, as hath been before shewed, and so serue it vp.

Take the *Kineys* of *Veale* after it hath been well roasted, and is cold; then shred it as fine as is possible: then take all sorts of sweet *Pothearbs* or *ferfing hearbs*, which haue no bitter or strong taste, and chop them as small as may be, and putting the *Veale* into a large dish, put the *hearbs* vnto it, and good store of cleane washt *currants*, *suger*, *cinamon*, the yelkes of foure *eggs*, a little sweete *creame* warmd, and the fine grated crummes of a halfe-penny loafe and *salt*, and mixe all exceeding well together; then take a deep pewter dish, and in it lay your paste very thin rowld out, which paste you must mingle thus: Take of the finest *Wheate-flower*, and a quarter so much *suger*, and a little *cinamon*; then breake into it a couple of *eggs*, then take sweete *creame* and *butter* melted on the fire, and with it knead the paste, and as was before-said, hauing spread *butter* all about the dishes sides, and rowld out the paste thin, lay it into the dish; then put in the *Veale*, and breake peeces of sweete *butter* vpon it, and scrape *suger* ouer it; then rowle out another paste reasonable thick, and with it couer the dish all ouer, closing the two pasts with the beaten *Whites* of *eggs* very fast together: then with your knife cut the lid into diuers prettie works according to your fancy: then set it in the *Ouen* and bake it with pies and tarts of like nature: when it is

*A Floren-
tine.*

*A Pruen
Tart.*

bake it, draw it, & trim the lid with suger, as hath bin shew-
ed in tarts, and so serue it vp in your second courses.
Take of the fairest damaske pruens you can get, and
put them in a cleane pipkin with faire water, suger, vi-
bruised cinamon, and a branch or two of Rosemarie; and
if you haue bread to bake, stew them in the ouen with
your bread; if otherwise, stew them on the fire: when
they are stewed, then bruisse them all to mash in their sir-
rop, and straine them into a cleane dish; then boyle it
ouer againe with suger, cinamon, and rosewater till it bee
as thicke as Marmalad; then set it to coole, then make a
reasonable tuffe paste with fine flower, water, and a little
butter, and rowle it out very thin; then hauing patterns of
paper cut in diuers proportions, as Beasts, Birds, Armes,
Knors, Flowers, and such like; lay the patterns on the
paste, and so cut them accordingly; then with your fin-
gers pinch vp the edges of the paste, and set the worke in
good proportion: then prick it well all ouer for rising,
and set it on a cleane sheete of large paper, and so set it
into the Ouen, and bake it hard: then draw it, and set it
by to coole: and thus you may doe by a whole Ouen
full at once, as your occasion of expence is: then against
the time of seruice comes, take off the cōfection of pruens
before rehearsed, and with your knife, or a spoone fill the
coffin according to the thicknes of the verge: then strow
it ouer all with caraway comfets, and pricke long comfets
vpright in it, and so taking the paper from the bottome,
serue it on a plate in a dish or charger, according to the
bignesse of the tarte, and at the second course, and this
tart carrieth the colour blacke.

Apple Tart.

Take Apples and pare them, and slice them thin from
the chore into a pipkin with White-wine, good store of
suger, cinamon, a few faunders and rosewater, and boile it
till

till it be thicke; then coole it, and straine it, and beate it very well together with a spoone; then put it into the coffin as you did the pruen Tart, and adorne it also in the same manner; and this tart you may fill thicker or thinner, as you please to raise the edge of the coffin; and it carrieth the colour red.

Take good store of *Spinage*, and boyle it in a Pipkin with White-wine till it be very soft as pap; then take it, and straine it well into a pewter dish, not leaving any part yntstrained; then put to it Rosewater, great store of suger, cinamon, and boyle it til it be as thick as Marmalad, then let it coole, and after fill your coffin, and adorne it, and serue it in all points as you did your pruen-tart, and this carrieth the colour Greene.

*A Spinage
Tart.*

Take the yelkes of eggs, and breake away the filmes, and beate them well with a little cream; then take of the sweetest and thickest cream can be got, and set it on the fire in a cleane skillett, and put into it suger, cinamon and rosewater, and then boyle it well: when it is boild, and still boyling, stirre it well, and as you stirre it, put in the eggs, and so boyle it till it curdle; then take it from the fire and put it into a strainer, and first let the thin whey runne away into a by-dish, then straine the rest very well, and beate it well with a spoone, and so put it into the Tart-coffin, and adorne it as you did your Pruen-tart, and so serue it: this carrieth the colour yellow.

*A yellow
Tart.*

Take the whites of eggs and beate the with rose-water, and a little sweet cream: then set on the fire good thick sweete Cream, and put into it suger, cinamon, rosewater, and boyle it well, and as it boyles stir it exceedingly, and in the stirring put in the whites of eggs; then boile it till it curdle, and after do in all things as you did to the yellow Tart, and this carrieth the colour white, and it is a very pure white, and therefore would be adorned with red car-

*A white
Tart.*

raway

raway Comfets. Now you may (if you please) put all these seuerall colours, and seuerall stufes into one tart, as thus; If the tart be in the proportion of a beast, the bodie may be of one colour, the eyes of another, the teeth of another, and the tallents of another; and so of birds, the bodie of one colour, the eyes another, the leggs of another, and euery feather in the wings of a seuerall colour according to fancie; and so likewise in Armes, the field of one colour, the charge of another, according to the forme of the Coat-armour: as for the mantles, trailes and deuices about Armes, they may be set out with seuerall colours of Preserues, Conserues, Marmalads and Goodinyaks, as you shall find occasion or inuention, and so likewise of Knots, one traile of one colour, and another of another, and so of as many as you please.

*An hearbe
Tart.*

Take *sorrell, spinage, parsely*, and boile them in water till they be very soft as pop, then take them vp, and presse the water cleane from them, then take good store of yelks of eggs boild very hard, and chopping them with the hearbs exceeding small, then put in good store of *currants, suger* and *cynamon*, and stirre all well together; then put them into a deep tart-coffin with good store of *sweet butter*, & couer it, & bake it like a *pipin-tart*, & adorne the lid after the baking in that maner also, and so serue it vp.

*To bake a
pudding pie.*

Take a quart of the best *creame*, and set on the fier, and slice a loafe of the lightest white bread into thin slices, and put into it, and let it stand on the fier till the *milke* begin to rise: then take it off, and put it into a bason, and let it stand till it be cold: then put in the yelkes of foure eggs, and two whites, good store of *currants, suger, cinamon, cloues, mace*, and plenty of *Sheepes suet* finely shred, and a good season of *salt*, then trim your pot very well round about with *butter*, and so put in your pudding, and bake it sufficiently, then when you serue it, strow *suger* vpon it.

Take

Take the best and sweetest cream, and boile it with good store of Sugar, and Cinamon, and a little rose-water, then take it from the fire and put into it cleane pickt ryce, but not so much as to make it thicke, & let it steepe therein till it be cold; then put in the yelkes of sixe egges, and two whites, Currants, Sugar, Cinamon, and Rose-water, and salt, then put it into a pan, or pot, as thinn as if it were a custard, and so bake it and serue it in the pot it is baked in, trimming the top with sugar or comfets.

A Whitepot.

There are a world of other Bak'd meates and Pies, but for as much as whosoeuer can doe these, may doe all the rest, because herein is contained all the Art of seasonings, I will trouble you with no further repetitions; but proceede to the manner of making of Banqueting stufte and conceited dishes, with other pretty and curious secrets, necessary for the vnderstanding of our English Houwife: for albeit they are not of general vse, yet their true times they are so needfull for adoration, that whosoeuer is ignorant therein, is lame, and but the half part of a compleat Houf-wife.

Of
banqueting
stufte and
conceited
dishes.

To make past of Quinces: first boile your quinces whole and when they are soft, pare them and cut the Quince from the core; Then take the finest sugar you can get finely beaten and searfed, and put in a little Rose-water & boile it together till it be thicke, then put in the cut quinces and so boile them together till it bee stiffe enough to mold, and when it is cold, then role it & print it; A pound of Quinces will take a pound of sugar, or nicere therabouts.

To make
past of Quinces.

To make thinne Quince cakes, take your quince when it is boiled soft as before said, and drie it vpon a Pewter plate with a soft heate, and be euer stirring of it with a slice till it be hard; then take searfed sugar quantity for quan-

To make
thin quince
cakes.

tity and strow it into the quince, as you beate it in a wooden or stone mortar; And so roule them thinne & print them.

To preserve
Quinces.

To preserve Quinces; first pare your quinces and take out the cores and boile the cores and parings altogether in faire water; and when they beginne to be soft, take them out and straine your liquor, and put the waight of your quinces in sugar, and boile the quinces in the sirrop till they be tender; Then take them vp and boile your sirrop till it be thicke: If you will haue your quinces red, couer them in the boiling, and if you will haue them white doe not couer them.

To make I-
pocras.

To make Ipocras, take a pottell of wine, two ounces of good *Cinnamon*, halfe an ounce of ginger, nine cloues, and sixe pepper cornes, and a nutmeg, and bruisse them and put them into the wine with some rosemary flowers, and so let them steepe all night, and then put in sugar a pound at least; and when it is well setled, let it runne through a woollen bag made for that purpose: thus if your wine be clarret, the Ipocras will be red; if white, then of that color also.

To make iel-
lie.

To make the best Ielly, take calves feet and wash them and scald of the haire as cleane as you can get it, then split them and take out the fat and lay them in water, and shift them: Then boile them in faire water vntill it will ielly, which you shall know by now and then cooling a spoonefull of the broth; when it will ielly then straine it, and when it is cold then put in a pint of sacke and whole *cinnamon* and *Ginger* slic't, and sugar and a little rose water, and boile all well together againe: Then beate the white of an egge and put it into it, and let it haue one boile more: then put in a branch of rosemary into the bottome of your ielly bag, and let it runne through once or
twice

twice, and if you will have it coloured, then put in a little Townefall. Also if you want calues feete you may make as good Jelly if you take the like quantity of Ifingglasse, & so vse no Calues feet at all.

To make the best Leache, take Ifingglasse and lay it two houres in water, and shute it and boile it in faire water and let it coole: Then take Almonds and lay them in cold water till they will blanch: And then stampe them and put to new milke, and straine them and put in whole mace and ginger slic'd, and boile them till it taste well of the spice; then put in your Ifingglasse and sugar, and a little rose-water: And then let them all runne through a strainer.

To make
Leache.

Take Clarret wine and colour it with Townefall, and put in sugar and set it to the fire; Then take wheat bread finely grated and sifted, and licoras, Aniseeds, Ginger and Cinamon beaten very small and searsed; and put your bread and your spice altogether, and put them into the wine and boile it and stirre it till it be thicke; then mould it and print it at your pleasure, and let it stand neither two moist nor two warme.

To make
ginger bread

To make red Marmelade of quinces, take a pound of quinces and cut them in halves, and take out the cores and pare them; then take a pound of sugar and a quart of faire water and put them all into a pan, and let them boile with a soft fire, and sometimes turne them and keep them covered with a Pewter dish, so that the teare or aire may come a little out; the longer they are in boiling the better colour they will have; and when they be soft take a knife and cut them crosse vpon the top, it will make the sirrop goe through that they may be all of a like colour: then set a little of your sirrop to coole, and when it beginneth to be thicke then breake your quinces with a slice

Marmalad
of quinces
red.

or a spoonne so small as you can in the pan, and then strow
a little fine sugar in your boxes bottom, and so put it vp.

*Marmalad
white.*

To make white Marmalade you must in all points vse
your quinces as is before said; onely you must take but a
pint of water to a pound of quinces, and a pound of su-
ger, and boile them as fast as you can, and couer them not
at all.

*To make
Iumbals.*

To make the best Iumbals, take the whites of three
egges and beat them well, and take of the yciell; then take
a little milke and a pound of fine wheat flower and sugar
together finely sifted, and a few Aniseeds well rubd and
dried; and then worke altogether as stiffe as you can
worke it, and so make them in what formes you please, &
bake them in a soft oven upon white Papers.

*To make
Bisket
bread.*

To make Bisket bread, take a pound of fine flower, and
a pound of sugar finely beaten and searfed, and mix them
together. Then take eight egges and put foure yelkes &
beat them wth the sugar together, then strow in your flower
er and sugar as you are beating off, by a little at once,
it will take very hoere an houres beating, then take halfe
an ounce of Aniseedes and let them be dried and rub-
bed very cleane, and put them in, then rub your Bisket
pans with cold butter, and make them as thinne as you can, and so
put it in and bake it in an oven. But if you would haue
thinne Cakes, then take fruit dishes and rub them in like
sort with butter, and so bake your Cakes on them, and
when they are almost baked, turne them and thrust them
downe close with your hand. Some to this Bisket bread
will adde a little Creame and a few Coriander feedes
cleane rubd, and it is not amisse, but excellent good also.

*To make fi-
ner iumbals.*

To make Iumbals more fine and curious then the for-
mer, and nearer to the taste of the Macaroon; take a
pound

pound of fugar beate it fine; then take as much fine wheat flower and mixe them together; then take two whites and one yelke of an egge, halfe a quarter of a pound of blanchd Almonds, then beat them very fine altogether with halfe a dish of sweet butter, and a spoonefull of rosewater, and so worke it with a little Creame till it come to a very stiffe past, then roule them forth as you please: And hereto you shall also if you please adde a few dried Aniseedes finely rubbed and strewed into the past.

To make drie sugar Leache, blanch your Almonds and beate them with a little rose water and the white of one egge, and you must beate it with a great deale of fugar, and worke it as you would worke a peece of past: then roule it and print it as you did other things, onely be sure to strew fugar in the print for feare of cleaung too.

To make Leache Lumbard, take halfe a pound of blanchd Almonds, two ounces of Cinomon beaten and searfed; halfe a pound of fugar, then beat your Almonds, and strew in your fugar and Cinamon till it come to a Paste, then roule it and print it as aforesaid.

To make an excellent fresh Cheese, take a pottle of Milke as it comes from the Cow and a pint of Creame: then take a spoonefull of rannet or earning and put it vnto it, and let it stand two houres; then stirre it vp and put it into a fine cloth, and let the whay draine from it: then put it into a bowle and take the yelke of an egge, a spoonefull of rosewater, and bray them altogether with a very little salt, with Sugar and Nutmegs; and when all these are braied together and searfed, mix it with the curd, and then put it into a Cheese-fatt with a very fine cloth.

To make courle Ginger bread, take a quart of hony and

To make dry
sugar leach.

To make
Leach Lums-
barde.

To make a
fresh Cheese.

To make
course gin-
ger bread.

and set it on the coales and refine it: then take a penny worth of *Ginger*, as much pepper, as much *Licoras*, and a quarter of a pound of *Aniseeds*, and a penny worth of *Saunders*: All these must be beaten and searfed, and so put into the hony: then put in a quarter of a pint of *Clarret wine* or old *Ale*: then take three penny *Manchers* finely grated and strow it amongst the rest, and stirre it till it come to a stiffe Past, and then make it into *Cakes* and drie them gently,

To make
quince Cakes
ordinary.

To make ordinary *Quince Cakes*, take a good peece of a preferued *Quince*, and beate it in a mortar, and worke it vp into a very stiffe past with fine searst *Sugar*: then print it and drie them gently.

To make
Cinamon
sticks.

To make most Artificiall *Cinamon* sticks, take an ounce of *Cinamon* & pound it, and half a pound of *suger*: then take some gumme *Dragon* and put it in steepe in *Rosewater*, then take thereof to the quantity of a hassell nut, and worke it out and print it, and roule it in forme of a *Cinamon* stick.

To make
Cinamon
water.

To make *Cinamon* water take a pottle of the best *Ale* and a pottle of sacke lees, a pound of *Cinamon* sliced fine, and put them together, and let them stand two daies; Then distill them in a limbecke or glasse Still.

To make
wormewood
water.

To make *Wormewood* water take two gallons of good *Ale*, a pound of *Aniseeds*, halfe a pound of *Licoras*, and beate them very fine; And then take two good handfuls of the crops of worme wood, and put them into the *Ale* and let them stand all night, and then distill them in a limbeck with a moderate fire.

To make
sweetewa-
ter.

To make sweet water of the best kind, take a thousand damask roses, two good handfuls of *Lauendar* knops, a three peny waight of *inace*, two ounces of cloues btuifed, a quart of running water: put a little water into the
bottom

bottom of an earthen pot, and then put in your Roses and Lauender with the spices by little and little, and in the putting in alwaies knead them downe with your fist, and so continue it vntill yon haue wrought vp all your Roses and Lauender, and in the working betweene put in alwaies a little of your water; then stop your pot close, and let it stand foure daies, in which time euery morning and euening put in your hand, and pull from the bottom of your pot the said Roses, working it for a time: and then distill it, and hang in the glasse of water a graine or two of Muske wrapt in a peece of Sarcenet or fine cloth.

Others to make sweet water, take of Ireos two ounces, of Calamus halfe an ounce, of Cipresse rootes halfe an ounce, of yellow Saunders nine drams, of Cloues bruised one ounce, of Benjamin one ounce, of Storax Calamint one ounce, and of Muske twelue graines, and infusing all these in Rose-water distill it.

Another way.

To make an excellent Date-Leach, take Dates, and take out the stones and the white rinde, and beate them with Suger, Cinamon and Ginger very finely: then work it as you would worke a peece of Paste, and then print them as you please.

To make date Leache

To make a kind of Suger plate, take Gumme Dragon, and lay it in Rose-water two daies: then take the powder of faire Heapps and Suger, and the iuyce of an Orange; beate all these together in a Morter, then take it out and worke it with your hand; and print it at your pleasure.

To make sugar Plate.

To make excellent spice Cakes, take halfe a pecke of very fine Wheat-flower, take almost one pound of sweet butter, and some good milke and creame mixt together, set it on the fire, and put in your butter, and a good deale of

To make spice Cakes.

of sugar, and let it melt together: then straine Saffron into your milke a good quantity; then take seven or eight spoonefull of good Ale barme, and eight egges with two yelkes and mix them together, then put your milke to it when it is somewhat cold, and into your flower puttale, Aniseedes bruised, Cloues and Mace, and a good deale of Cinamon: then worke all together good and stiffe, that you need not worke in any flower after; then put in a little rosewater cold, then rub it well in the thing you knead it in, and worke it thoroughly: if it be not sweet enough, scrape in a little more suger, and pull it all in peeces, and hurle in a good quantity of Currants, and so worke all together againe, and bake your Cake as you see cause in a gentle warme ouen.

*To make a
Banbury
Cake.*

To make a very good Banbury Cake, take 4. pounds of Currants, and wash and picke them very cleane, and drie them in a cloth: then take three egges and put away one yelke, and beate them, and straine them with good barme, putting thereto Cloues, Mace, Cinamon and Nutmegges; then take a pint of creame, and as much mornings milke and set it one the fire till the cold be taken away; then take flower and put in good store of cold butter and suger, then put in your egges, barme and meale and worke them all together an houre or more; then saue a part of the Past, and the rest breake in peeces and worke in your Currants; which done, mould your Cake of what quantity you please; And then with that past which hath not any Currants couer it very thinne both vnderneath and a loft. And so bake it according to the bignesse.

*To make the
best March
Pane.*

To make the best March-pane, take the best Iordan almonds & blaunch them in warm water, then put them into a stone mortar, and with a wooden pestell beate them to pappe, then take of the finest refined sugar well searst, and

to pappe; then take of the finest refined suger well searst, and with it Damaske rosewater; Beate it to a good stiffe paste, allowing almost to euery Jordan almond three spoonful of suger; then when it is brought thus to a paste, lay it vpon a faire table, & stroweing searst suger vnder it, mould it like leauen, then with a rolling-pin role it forth, and lay it vpon wafers wash with rosewater; then pinch it about the sides, and put it into what forme you please; then strow searst suger all ouer it; which done, wash it ouer with rosewater and suger mixt together, for that will make the Ice; then adorne it with Cumfers, gilding, or whatsoeuer deuices you please, and so set it into a hot stoue, and there bake it crispie, and so serue it forth. Some vse to mixe with the paste cinamon and ginger finely searst, but I referre that to your particular taste.

To make paste of Genoa, you shall take Quinces after they haue been boiled soft, and beate them in a mortar with refined suger, cinamon and ginger finely searst, and Damaske rosewater till it come to a stiffe paste; and role it forth and print it, and so bake it in a stoue; and in this sort you may make paste of Peares, Apples, Wardens, Plummes of all kinds, Cherries, Barberies, or what other fruit you please.

To make conserue of any fruit you please, you shall take the fruit you intend to make conserue of; and if it be stone fruit you shal take out the stones; if other fruit, take away the paring and core, and then boile them in faire running water to a reasonable height; then draine them from thence, and put them into a fresh vessell with Claret wine, or White wine, according to the colour of the fruit: and so boyle them to a thicke pap all to mashing, breaking, and stirring them together, then to euery pound of pappe put to a pound of Sugar, and so stirre them all

R

well

To make
paste of Ge-
noa, or any
other paste.

To make any
Conserue.

well together, and being very hot straine them through faire strainers, and so pot it vp.

*To make
Conserue of
Flowers.*

To make conserue of Flowers, as Roses, Violets, Gillyflowers, and such like; you shall take the flowers from the stalkes, and with a paire of sheeres cut away the white ends at the roots thereof, and then put them into a stone mortar or wooden brake, and there crush or beate them till they bee come to a soft substance; and then to euery pound therof, take a pound of fine refined suger wel searst and beate it all together, till it come to one intire bodie, and then pot it vp, and vse it as occasion shall serue.

*To make
Wafers.*

To make the best Wafers, take the finest wheat-flower you can get, and mixe it with creame, the yelkes of eggs, rosewater, suger and cinamon til it be a litle thicker then Pan-cake batter; and then warming your wafer-yrons on a Char-coale fire, annoint them first with sweete butter, and then lay on your batter and presse it, and bake it white or browne at your pleasure.

*To make
Marmalade
of Oranges.*

To make an excellent Marmalade of Oranges, take the Oranges, and with a knife pare off as thinne as is possible the vppermost rinde of the Orange; yet in such sort, as by no meanes you alter the colour of the Orange; then steepe them in faire water, changing the water twice a day, till you find no bitternesse of taste therein; then take them forth, and first boyle them in faire running water, and when they are soft, remoue them into rosewater, and boile them therein till they breake: then to euery pound of the pulpe put a pound of reined sugar, and so hauing masht and stirred them all wel together, straine it through very faire strainers into boxes, and so vse it as you shal see occasion.

*Additi-
ons*

*to Banquet-
ting stuffe.*

Take a pottle of fine flower, and a pound of butter, a pound of Suger, one ounce of Mace, and so much Rose-water

water as will mingle the flower into a thicke paste, and a good season of Salt, and so knead it, and role out the cake thin and bake them on papers.

To make fine Cakes.

Take a quarter of a pound of fine suger well beaten, and as much flower finely bouled, with a quantitie of Aniseedes a little bruised, and mingle all together; then take two egges and beate them very well, whites and all; then put in the mingled stuffe aforesaid, and beate all together a good while, then put it into a mould, wiping the bottome ever first with butter to make it come out easie, and in the baking turne it once or twice as you shall haue occasion, and so serue it whole, or in slices at your pleasure.

Fine bread.

Take sweete Apples and stampe them as you doe see Cider, then presse them through a bagge as you do verice; then put it into a serkin wherein you will keep your Quinces, and then gather your Quinces, and wipe them cleane, and neither chore them nor pare them, but onely take the blacks from the tops, and so put them into the serkin of Cider, and therein you may keepe them all the yeare very faire, and take them not out of the liquor, but as you are ready to vse them, whether it be for pies, or any other purpose, and then pare them, and chore them as you thinke good.

To preserve Quinces for kitchen seruise.

Take a gallon of Clarret or White-wine, and put therein foure ounces of Ginger, an ounce and a halfe of Nutmegs, of Cloues one quarter, of Sugar foure pound; let all this stand together in a pot at least twelue houres, then take it, and put it into a cleane bagge made for the purpose, so that the wine may come with good leasure from the spices.

To make Epocras.

Take Quinces and wipe them very cleane, and then chore them, & as you chore them, put the chores straight into

To preserve quinces.

into faire water, and let the chores and the water boyle; when the water boyleth, put in the Quinces vnpared, and let them buyle till they be tender, and then take them out and pare them, and euer as you pare them, put them straight into suger finely beaten: then take the water they were sodden in, and straine it through a faire cloth, and take as much of the same water as you thinke will make Sirrop enough for the Quinces, and put in some of your suger and let it boyle a while, and then put in your Quinces, and let them boyle a while, and turne them, and cast on a good deale of suger vpon them, they must seeth apace, and euer as you turne them, couer them still with suger, til you haue bestowed all your suger; & when you thinke that your Quinces are tender enough, take them fourth, and if your sirrop be not stiffe enough, you may seeth it againe after the Quinces are forth. To euerie pound of Quinces you must take more then a pound of suger: for the more suger you take, the fairer your Quinces will bee, and the better and longer they will keepe.

*Conserue of
quinces.*

Take two gallons of faire water, and set it on the fier, and when it is luke warme, beate the whites of fve or six eggs, and put them into the water, and stir it well, and then let the water seeth, and when it riseth, up all on a curd, then scumme it off: Take Quinces and pare them, and quarter them, and cut out the chores: then take as many pound of your Quinces as of your suger, and put them into your liquor, and let it boyle till your liquor bee as ill coloured as French Wine, and when they be very tender, then take a faire new canuase cloth faire wash, and straine your Quinces through it with some of your liquor, if they will not go thorow easily, then if you will make it very pleasant, take a little Muske, and lay it in

Rose-

Rosewater, and put it thereto; then take and seeth it, vntill it be of such substance, that when it is cold, it will cut with a knife; and then put it into a faire boxe, and if you please, lay leafe-gold thereon.

Take all the parings of your Quinces, that you make your Conserue withall, and three or foure other Quinces, and cut them in peeces, and boyle the same parings, and the other peeces in two or three gallons of water, and so let them boyle till all the strength bee sodden out of the said Quinces and parings, and if any skumme arise whilest it boyles, take it away: then let the said water run thorow a strainer into a faire vessell, and set it on the fire againe, and take your Quinces that you will keepe, and wipe them cleane, and cut off the vttermost part of the said Quinces, and picke out the kernels and piores as cleane as you can, and put them into the said liquor, and so let them boyle till they bee a little soft, and then take them from the fire, and let them stand till they bee cold: then take a little barrell, and put into the said barrell, the water that your Quinces be sodden in, then take vp your Quinces with a ladle, and put them into your barrell, and stop your barrell close, that no ayre come into them, till you haue fit occasion to vse them; and bee sure to take such Quinces as are neither brused nor rotten.

To keepe
quinces all
the yeere.

Take of the best suger, and when it is beaten searse it very fine, and of the best Ginger and Cinamon, then take a little Gum dragon and lay it in rosewater al night, then powre the water from it, and put the same with a little White of an Egge well beaten into a brasle mortar, the Suger, Ginger, Cinamon and all together, and beate them together till you may worke it like paste; then take it and driue it forth into Cakes, and print them, and

Fine Ginger
Cakes.

lay them before the fire, or in a very warme Stoue to bake. Or otherwise, take Sugar and Ginger (as is before said) Cinamon and Gum-dragon excepted, in stead whereof, take onely the Whites of Egges, and so doe as was before shewed you.

To make
Suckets.

Take Curds, the parings of Lemons, of Oranges or Pouncithrons, or indeed any halfe-ripe greene fruit, and boyle them till they bee tender in sweete Worts; then make a Sirrop in this sort; take three pound of Sugar, and the Whites of foure Egges, and a gallon of water; then swinge and beate the water and the Eggs together, and then put in your Sugar, and set it on the fier, and let it haue an easie fier, and so let it boyle fixe or seuen walmes, and then straine it thorow a cloth, and let it seeth againe till it fall from the spoone, and then put it into the rindes or fruits.

Course Gin-
ger-bread

Take a quart of Honie clarified, and seeth it till it bee browne, and if it be thicke, put to it a dish of water: then take fine crummes of white bread grated, and put to it, and stirre it well, and when it is almost cold, put to it the powder of Ginger, Cloues and Cinamon, and a little Licoras and Aniseedes; then knead it, and put it into moulds and print it: some vse to put to it also a little Pepper, but that is according vnto taste and pleasure.

Ordering of
Banquets.

Thus hauing shewed you how to Preserue, Conserue, Candie, and make Pastes of all kinds, in which foure heads consists the whole Art of banqueting dishes, I will now proceede to the ordering or setting forth of a Banquet, wherein you shall obserue, that March-panes haue the first place, the middle place, and last place; your preserued fruits shall be disht vp first, your Pastes next, your wet Suckets after them, then your dried Suckets, then your

your Marmelades and Goodiniakes, then your Cumfets of all kinds; next your Peares, Apples, Wardens bak't, raw or roasted, and your Oranges and Lemons sliced; and lastly your Wafer-cakes. Thus you shall order them in the Closet; but when they goe to the table, you shall first send forth a dish made for shew onely, as Beast, bird, Fish, or Fowle, according to inuention: then your Marchpane, then Preserued Fruite, then a Paste, then a wet Sucket, then a drie Sucket, Marmelade, Cumfets, Apples, Peares, Wardens, Oranges and Lemmons sliced; and then Wafers, and another dish of preserued Fruites, and so consequently all the rest before: no two dishes of one kind going or standing together, and this will not onely appeare delicate to the eye; but inuite the appetite with the much varietie thereof.

Now we haue drawne our *Houswife* into these seuerall knowledges of Cookerie, in as much as in her is contained all the inward offices of household, wee will proceede to declare the manner of seruing and setting forth of Meate for a great Feast, and from it deriue meanes, making a due proportion of all things: for what auails in our good *Houswife* to be neuer so skilful in the parts of Cookerie, if she want skill to marshall the dishes, and set every one in his due place, giuing precedency according to fashion and custome; it is like a Fencer leading a band of men in rout, who knowes the vse of the weapon, but not how to put men into order. It is then to bee vnderstood, that it is the office of the Clerke of the Kitchin (whose place our *Houswife* must many times supply) to order the meate at the Dresser, and deliuer it vnto the Sewer, who is to deliuer it to the Gentlemen and Yeomen-wayters to beare to the Table. Now because wee allow

Ordering of
great Feasts
and proportion
of expence.

allow no Officer but our *Houſwife*, to whom wee onely ſpeake in this booke, ſhe ſhall firſt marſhall her ſallets, deliuering the grand Sallet firſt, which is euer more compound; then greene Sallets, then boyld Sallets, then ſome ſmaller compound Sallets. Next vnto Sallets ſhe ſhall deliuer forth all her Fricafes, the ſimple firſt, as Collops, Raſhers, and ſuch like; then compound Fricafes; after them all her boyld-meates in their degrees, as ſimple broths, ſtewd-broth, and the boylings of ſundrie Fowles. Next them all ſorts of Roſt-meates, of which the greateſt firſt, as Chine of beeffe or Surloine, the Gigger or Legges of Mutton, Goofe, Swan, Veale, Pig, Capon, and ſuch like. Then bak't-meates, the hot firſt, as Fallow-deare in Paſtie, Chicken, or Calues-foote pie and Douſet. Then cold bak't-meates, Pheasant, Partridges, Turkey, Goofe, Woodcock, and ſuch like. Then laſtly, Carbonados both ſimple and compound. And being thus marſhald from the Dreſſer, the Sewer vpon the placing them on the table, ſhall not ſet them downe as hee receiued them, but ſetting the Sallets extrauagantly about the table, mixe the Fricafes about them; then the boild-meates amongſt the Fricafes, Roſt-meates amongſt the boyld, Bak't-meats amongſt the Roſt, and Carbonados amongſt the bak't; ſo that before euery trencher may ſtand a Sallet, a fricaſe, a Boyld-meate, a Roſt-meate, a Bak't-meate, and a Carbonado, which will both giue a moſt comely beautie to the Table, and very great contentment to the Gueſſe. So likewise in the ſecond courſe ſhe ſhall firſt preferre the leſſer wild-fowle, as Mallard, Tayle, Snipe, Plouer, Wood-cock, and ſuch like: then the leſſer land-fowle; as Chicken, Pigeons, Partridge, Raile, Turkie, Chickens, young Pea-hens, and ſuch like.

yolla

Then

Then the greater wild-fowle ; as Bitter, Hearn, Shou-
ler, Crane, Bustard, and such like. Then the greater land-
fowles ; as Peacocks, Pheasant, Pucets, Gullies, and such
like. Then hot Bak't-meates; as Marrybone-pie, Quince
pie, Florentine, and Tarts. Then cold bak't-meates, as
Red-deere, Hare-pie, Gammon of Bacon-pie, wild Bore,
Roe-pie, and such like, and these also shall be marshald at
the Table, as the first course not one kind altogether, but
each severall sort mixt together, as a lesser wild-fowle
and a lesser land-fowle ; a great wild-fowle, and a great
land-fowle ; a hot bak't meate, and a cold : and for made
dishes and Quelquechoses, which relie on the inuention
of the Cooke, they are to bee thrust in into euery place
that is emptie, and so sprinckled ouer all the table : and
this is the best method for the extraordinarie great feasts
of Princes. But in case it bee for much more humble
meanes, then lesse care and fewer dishes may discharge it;
yee, before I proceed to that lower rate, you shall vnder-
stand, that in these great Feasts of Princes, though I haue
mentioned nothing but Flesh, yet is not fish to be exemp-
ted ; for it is a beautie and an honour vnto euery Feast,
and is to be placed amongst all the severall seruices, as
thus ; as amongst your Sallets all sorts of fouse-fish that
liues in the fresh water; amongst your Fricases all manner
of fride-fish ; amongst your boyld-meates, all fish in
broaths; amongst your rost-meates, all fish serued hot, but
drie ; amongst the bak't-meates, all fish bak't, and sea-fish
that is soust, as sturgeon and the like ; and amongst your
Carbonados, fish that is broild. As for your second
course, to it belongeth all manner of shell-fish, either in
the shell, or without the hot, to goe vp with the hot
meate, and the cold with the cold. And thus shall the
Feast be royall, and the seruice worthie.

Now for a more humble Feast, or an ordinary proportion which any good man may keepe in his family for the entertainment of his true and worthie friends, it must hold limitation with his prouision, and the season of the yeere; for summer affords what winter wants, and winter is master of that which summer can but with difficultie haue: it is good then for him that intends to feast, to set downe the full number of his full dishes, that is, dishes of meate that are of substance, and not emptie or for shew; and of these fixteene is a good proportion for one course vnto one messe, as thus for example; first, a sheild of Brawne with Mustard; secondly, a boyld Capon; thirdlie, a boyld peece of Beefe; fourthlie, a Chine of Beefe roasted; fifthlie, a Neates Tongue roasted; sixthlie, a Pigge roasted; seuenthlie, Chewets bakt; eighthlie, a Goose roasted; ninthlie, a Swan roasted; tenthly, a Turkey roasted; the eleuenth, a Haunch of Venyson roasted; the twelfth, a Pastie of Venyson; the thitteenth, a Kid with a pudding in the belly; the fourteenth, an Ollue pie; the fifteenth, a couple of Capons; the sixteenth, a Custard of Dousets. Now to these full dishes may bee added in Sallers, Fricases, quelquechoses, and deuised paste, as many dishes more, which make the full seruice no lesse then two and thirtie dishes, which is as much as can conueniently stand on one table, and in one messe; and after this manner you may proportion both your second and third course, holding fulnesse in one halfe of the dishes, and shew the other, which will be both frugall in the spender, contentment to the guest, and much pleasure and delight to the beholders. And thus much touching the ordering of great Feasts and ordinarie entertainements,

When our *English Housewife* is exact in these rules before

fore rehearsed, and that she is able to adorne and beautifie her table, with all the vertuous illustrations meet for her knowledge; shee shall then fort her mind to the vnderstanding of other House-wisely secrets, right profitable and meet for her vse, such as the want thereof may trouble her when need, or the time requires them.

Therefore first I would haue her furnish her self of very good Stills, for the distillation of all kindes of Waters, which Stills would either be of Tinne, or sweet Earth, & in them shee shall distill all sorts of waters meete for the health of her Household, as Sage water, which is good for all Rhumes and Collickes; Radish water, which is good for the stone, Angelica water good for infection, Celadine water for sore eyes, Vine water for itchings, rose water, and Eye-bright water for dimme sights, Rosemarye water for Fistuloes, Treacle water for mouth cankers, water of Cloues for paine in the stomacke, Saxifrage water for grauell and hard Urine, Allum water for old Vicers, and a world of others, any of which will last a full yeere at the least: Then shee shall know that the best waters for the smoothing of the skinne, and keeping the face delicate and amiable, are those which are distilled from Beane flowers, from Strawberies, from Vine leaves, from Goats milke, from Asses milke, from the whites of Eggs, Additi- from the Flowers of Lillies, from Dragons, from Calues feete, from branne, or from yelkes of egges, any of which will last a yeere or better.

OF Distillations.

The nature of waters.

First distill your water in a stillatorie; then put it in a glasse of great strength, and fill it with those flowers again (whose colour you desire) as full as you can, & stop it and set it in the stillatorie againe, and let it distill, & you shall haue the colour you desire.

to distillations.

To distill water of the colour of the beehoe or flower you desire.

To make

Take of Rosemary flowers two handfuls, of maria-

rome, aquanita.

roſe, winter-ſauory, roſemary, rewe, vnſet Time, Ger-
 mander, Rybworre, Harts tong, Mouſeare, White worm-
 wood, Bugloſſe, Red ſage, Liuer-worre; Hoare-hound,
 fine Lauender, Iſſop-croppes, Penny-royall, Red-fenell,
 of each of theſe one handfull; of Elycompane roots,
 cleane pared and ſliced, two handfulls; Then take all
 theſe afore-ſaid and ſhred them, but not waſh them; then
 take foure gallons and more of ſtronge Ale, & one
 gallon of Sack-lees, and put all theſe aforeſaid hearbes
 ſhred into it, and then put into it one pound of Licoras
 bruised, halfe a pound of anyſeedes cleane ſifted and brui-
 ſed, and of Mace & Nutmeggs bruised of each one ounce;
 then put altogether into your ſtilling-pot cloſe couered
 with Rye paſte, and make a ſoft fire vnder your pot, and
 as the head of the Limbecke heateth, draw out your hot
 water and put in cold, keeping the head of your Limbeck
 ſtill with cold water, but ſee your fire be not too raſh at
 the firſt, but let your water come at leaſure, and take
 heed vnto your ſtilling that your water change not white,
 for it is not ſo ſtrong as the firſt draught is; and when the
 water is diſtilled, take a gallon glaſſe with a wide mouth,
 and put therein a pottell of the beſt water and cleereſt,
 and put to it a pottell of Roſa ſolis, halfe a pound of Dates
 bruised, and one ounce of graynes, halfe a pound of Sugar,
 halfe an ounce of ſeed-pearle beaten, three leaues of ſine
 gold; ſtirre all theſe together well, then ſtop your
 glaſſe and ſet it in the ſunne the ſpace of one or two
 moneths, and then clarifie it and vſe it at your diſcretion;
 for a ſpoonefull or two at a time is ſufficient, and the ver-
 tues are infinite.

*Another ex-
 cellent aqua-
 vita.*

Fill a pot with red wine cleane and ſtronge, and put
 therein the pouders of cardomyle, gillyflowers, ginger,
 pellytory, Nutmegg, Gallengall, Spicknard, quenebits,
 graynes

graines of pure long pepper, blacke pepper, commin, fenell seede, finalledge, parsley, Sage, Rew, mint, calamin and horshew, of each of them a like quantity, and beware they differ not the waight of a dram vnder or aboue; then put all the pouders aboue said into the wine, and after put them into the distilling pot, and distill it with a soft fyre, & looke that it bee well lured about with rye paste, so that no fume or breath goe forth, and looke that the fire be temperate; also receiue the water out of the Lymbecke into a glassevyall. This water is called the water of life, & it may be likned to Balme, for it hath all the vertues and properties which Balme hath; this water is cleere and lighter then rosewater, for it will fleete aboue all liquors, for if oyle be put aboue this water, it sinketh to the bottome. This water keepeth flesh & fish both raw & sodden in his own kinde & state, it is good against aches in the bones, the poxe, and such like, neither can any thing kept in this water rot or putrifie, it doth draw out the sweetnesse, sauer, and vertues of all manner of spices, rootes and hearbes that are wet or layd therein, it giues sweetnes to all manner of water that is myxt with it; it is good for all manner of cold sicknesses, and namely for the palsy or trembling Ioynts, & stretching of the sinews; it is good against the cold gout; and it maketh an old man seeme young, vsing to drinke it fasting, and lastly it fretteth away dead flesh in wounds, and killeth the canker.

Take rosemary, Time, Iffop, sage, fenell, nip, roots of elicompaine, of each an handfull, of marierum, and pennyroyall of each halfe a handfull, eight flippes of red mynt, halfe a pound of Licoras, halfe a pound of aniseeds and two gallands of the best Ale that can be brewed, wash all these hearbes cleane, & put into the Ale, licoras, aniseeds, and hearbes into a cleane brasse pot, and set your limbecke thereon,

*To make a
qua compo-
sita.*

thereon, and paſte it round about that no ayre come our, then diſtill the water with a gentle fire, and keepe the lymbecke coole aboue, not ſuffering it to runne too faſt; and take heede when your water changeth colour, to put another glaſſe vnder, and keepe the firſt water, for it is moſt precious, and the latter water keepe by it ſelfe, and put it into your next pot, and that ſhall make it much better.

A very principall aqua-compoſita.

Take of balme, of roſemary Flowers tops and all, of dried red roſe leaues, of penny-royall, of each of theſe a handfull, of Iſſop halfe a handfull, one roote of elycompane the whitest that can be got, three quarters of a pound of Licoras, two ounces of Cinamond, two drams of great mace, two drams of gallendgall, three drams of colliander ſeed, three drammes of carraway ſeeds, two or three Nutmegs cut in foure quarters, an ounce of aniſeeds, a handfull of Borage; you muſt chule a faire ſunny day to gather the hearbes in; you muſt not waſh them, but cut them in ſunder, and not too ſmall; then lay all your hearbes in ſouſe all night and a day, with the ſpices groſſy beaten or bruised, & then diſtill it in order aforeſaid; this was made for a learned Phiſitians owne drinking.

To make the emperiall water.

Take a galland of Gaſcoin wine, ginger, gallengall, nutmegs; grains, Cloues, aniſeeds, fenell ſeedes, carraway ſeeds, of ech one dram, the ſake ſage, mints, red-roſes, time pellitory, Roſe-mary, wildtime, camomile, and Lauen-der, of ech a handfull, then bray the ſpices ſmall, and the hearbs alſo, & put al together into the wine, and let it ſtand ſo twelue houres, ſtirring it diuers times, then diſtill it with a limbecke, and keepe the firſt water, for it is beſt: of a gallon of wine you muſt not take aboue a quart of water; this water comforteth the vitall ſpirits, and helpeth inward diſeaſes that commeth of cold, as the palſey,

sey, the contraction of sinewes, also it killeth wormes, and comforts the stomacke, it cureth the cold droply, helps the stone, the stinking breath, and maketh one seem yong.

Take a pottell of the best Sacke, & halfe a pint of Rose-water, a quarter & half of a pound of good Cinamon well bruised, but not small beaten; distill all these together in a glasse still, but you must carefully looke to it, that it boyle not ouer hastily, & attend it with cold wet cloathes to coole the top of the still if the water should offer to boyle too hastily. This water is very soueraigne for the stomacke, the head, and all the inward parts; it helps digestion, & comforteth the vitall spirits.

To make
Cinamon-
water.

1 Take Fennell, Rew, Veruine, Endiue, Betony, Germanander, Redrose, Capillus veneris, of each an ounce; stampe them and steepe them in white wine a day and a night; and distill water of them, which water will diuide in three parts, the first water you shall put in a glasse by it selfe, for it is more pretious then gold, the second as siluer, and the third as Balme, and keepe these three parts in Glasses: this water you shall giue the rich for gold, to meaner for siluer, to poore men for Balme: this water keepeth the sight in cleernes, and purgeth all grosse humors.

Six most
pretious wa-
ters, which
Hypocrates
made, and
sent to a
Queene
sometimes
lining in
England.

2 Take *Salgemma* a pound, and lay it in a green docke leafe, and lay it in the fier till it bee well rosted, and waxe white, and put it in a glasse against the aire a night, and on the morrow it shalbe turned to a white water like vnto Christall: keepe this water well in a glasse, and put a drop into the eie, and it shall clense and sharpe the sight: it is good for any euill at the heart, for the morphew, and the canker in the mouth, and for diuers other euils in the body.

3 Take the roots of Fenell, Parseley, Endiue, Betony,
of

of each an ounce, and first wash them well in luke-warme water, and bray them well with white wine a day and a night, and then distill them into water: this water is more worthy then Balme; it preserueth the sight much, and clenseth it of all filth, it restraineth teares, and comforteth the head, and auoideth the water that commeth through the payne in the head.

4 Take the seed of Parsley, Achanthes, Verruine, Carawaies, and centuary, of each ten drams; beat all these together, and put it in warme water a day and a night, and put it in a vessell to distill: this water is a pretious water for all forecies, and very good for the health of man or womans bodie.

5 Take limmel of gold, siluer, latten, copper, iron, Steele, & leade; & take lethurgy of gold & siluer, take callamint & columbine, & steep al together, the first day in the vrine of a man-childe, that is between a day & a night, the second day in white wine, the third day in the iuyce of fennel, the fourth day in the whites of egges, the fift day in the womans milke that nourisheth a man-child, the sixt day in red wine, the seuenth day in the whites of egges, and vpon the eight day bind all these together, and distill the water of them, and keepethis water in a vessell of gold or siluer: the vertues of this water are these, first it expelleth all rhumes, and doth away all manner of sicknes from the eies, and weares away the pearle, pin and webbe; it draweth againe into his owne kinde the cie-lids that haue been bleared, it easeth the ache of the head, and if a man drinke it, maketh him looke young euen in old age, besides a world of ohter most excellent vertues.

6 Take the Gold-smiths stone, and put it into the fier, till it bee red-hot, and quench it in a pint of white wine, and doe so nine times, and after grind it, and beat it
small,

small, and clense it as cleane as you may, and after set it in the sunne with the water of Fennell distilled, and Veruine, Roses, Celladine and Rew, and a little Aquauite, and when you haue sprinkled it in the water nine times, put it then in a vessell of glasse, and yet vpon a reuerfion of the water distill it, till it passe ouer the touch foure or fve inches; and when you will vse it then stirre it all together, and then take vp a drop with a feather, and put it on your naile, & if it abyde, it is fine and good: then put it in the eie that runneth, or annoynt the head with it if it ake, and the temples, and belecue it, that of all waters this is the most pretious, and helpeth the sight or any paine in the head.

The water of Cheruyle is good for a sore mouth.

The water of Callamynt is good for the stomacke.

The water of Planten is good for the fluxe, and the hot dropfy.

Water of Fennell is good to make a fat body small, and also for the eies.

Water of Violets is good for a man that is sore within his body, and for the raynes, and for the liuer.

Water of endiue is good for the dropfy, and for the iaundyse, and the stomacke.

Water of Borage is good for the stomacke, and for the illica passio, and many other sicknesfes in the body.

Water of both Sages is good for the palsey.

Water of Bettony, is good for the heary ago, and all inward sicknesfes.

Water of Radish drunke twice a day, at each time an ounce, or an ounce and a halfe, doth multiply and prouoke lust, and also it prouoketh the tearmes in women.

Rosemary water (the face washed therein both morning and night) caueth a faire and cleere countenance:

*The vertues
of seuerall
waters.*

also the head washed therewith, and let dry of it selfe, preserveth the falling of the haire, and causeth more to growe; also two ounces of the same drunke, driueth venome out of the body in the same sort as Methridate doth; the same twice or thrice drunke at each time halfe an ounce, rectifieth the mother, and it causeth womē to be fruitful: when one maketh a Bath of this decoction, it is called the Bathe of life; the same drunke comforteth the heart, the brayne, and the whole body, and clenseth away the spots of the face; it maketh a man looke young, and causeth women to conceiue quickly, and hath all the vertues of Balme.

Water of Rew drunke in a morning foure or fve daies together, at each time an ounce, purifieth the flowers in women; the same water drunke in the morning fasting, is good against the gryping of the bowels, and drunke at morning and at night, at each time an ounce, it prouoketh the termes in women.

The water of Sorrell drunke is good for al burning & pestilent feuers, and all other hot sicknesses; being mixt with beere, ale or wine, it slaketh thirst; it is also good for the yellow laundise, being taken fixe or eight daies together; it also expelleth heate from the liuer if it be drunke, and a clothe wet in the same and a little wrung out, and so applied to the right side ouer against the liuer, and when it is drie then wet another, and apply it; and thus doe three or foure times together.

Lastly the water of Angelica is good for the head; for inward infection, either of the plague or pestilence, it is very soueraigne for sore breasts; also the same water being drunke of twelue or thirteene daies together, is good to vnlade the stomacke of grosse humors and superfluities, and it strengthneth and comforteth all the

uniuerfall parts of the body: and lastly, it is a most soueraine medicine for the gout, by bathing the diseased member much therein.

Now to conclude and knit vp this chapter, it is meete that our huswife know that from the eight of the kallends of the moneth of aprill vnto the eight of the Callends of Iuly, all manner of hearbes & leaues are in that time most in strength and of the greatest vertue to be vsed and put in all manner of medicines, also from the eight of the Callends of Iuly vnto the eight of the Callends of October the stalks, stems and hard braunches of euery hearbe and plant is most in strength to be vsed in medicines; and from the eight of the callends of October, vnto the eight of the Callends of Aprill, all manner of roots of hearbs and plants are the most of strength and vertue to be vsed in all manner of medicines.

To make an excellent sweet water for perfume, you shall take of Basil, mints, Mariorum, Corne-flagge roots, Ilop, Sauory, Sage, Balme, Lauender and Rosemary, of each one a handfull, of Cloues, Cinamon and Nutmegges of each halfe an ounce, then three or foure Pome-citrons cut into slices, infuse all these into Damaske-rose water the space of three daies, & then distill it with a gentle fire of Charcole, then when you haue put it into a very clean glasse, take of fat Muske, Ciuet, and Ambergreece of each the quantity of a scruple, and put into a ragge of fine Lawne, and then hang it within the water: This being either burnt vpon a hot pan, or else boiled in perfuming pannes with Cloues, Bay-leaues and Lemmon-pils, will make the most delicatest perfume that may be without any offence, and will last the longest of all other sweet perfumes, as hath been found by experience.

*An excellent
water for
perfume.*

To perfume gloves excellently, take the oyle of sweet

*To perfume
Gloves.*

Almonds, oyle of Almonds, oyle of Nutmegs, oyle of Benjamin, of each a dramme, of Ambergreece one graine, fat Muske two graines: mixe them altogether and grind them vpon a painters ſtone, and then annoint the gloues therewith: yet before you annoint them let them be dampiſhly moiſtned with Damaske Roſe water.

*To perfume
a Ierkin.*

To perfume a Ierkin well, take the oyle of Benjamin a penny-worth, oyle of Spike, and oyle of Oliues half peny-worths of each, and take two ſponges and warme one of them againſt the fire and rubbe your Ierkin there with; and when the oyle is dryed, take the other ſponge and dippe it in the oyle and rub your Ierkin therewith till it bee dry, then lay on the perfume before preſcribed for gloues.

*To make
Washing
Bals.*

To make very good waſhing balls, take Storax of both kindes, Benjamin, Calamus Aromaticus, Labdanum of each a like; and bray them two powder with Cloues and Arras; then beate them all with a ſufficient quantity of Sope till it bee ſtiſſe, then with your hand you ſhall worke it like paſte, and make round balls thereof.

*To make a
muſke Ball.*

To make Muſke balls, take Nutmegs, Mace, Cloues, Saffron and Cinamon, of each the waight of jj^d , and beat to fine powder, of Maſticke the weight of two-pence halfe peny, of Storax the weight of ſix-pence; of Labdanum the weight ten-pence; of Ambergreece the weight of ſixe-pence; and of Muſke foure graines, diſſolue and worke all theſe in hard ſweet ſope till it come to a ſtiſſe paſte, and then make balls thereof.

*A perfume
to burne.*

To make a good perfume to burne, take Benjamin one ounce, Storax Calamint two ounces, of Maſticke, white Ambergreece, of each one ounce, Ireos, Calamus aromaticus, Cypreſſe wood, of each halfe an ounce,
of

of Camphire one scruple, Labdanum one ounce: beate all these to powder, then take of Sallow Charcole fixe ounces, of liquid Storax two ounces, beate them all with Aquauita, and then shall you role them into long round roubles.

To make Pomanders, take two peniworth of Labdanum two peniworth of Storax liquid, one peniworth of Calamus aromaticus, as much Balme, halfe a quarter of a pound of fine waxe, of Cloues & Mace two peny-worth, of liquid Aloes three peniworth, of Nutmegges eight peniworth, and of Muske foure graines, beat all these exceedingly together till they come to a perfect substance, then mould it in any fashion you please and drie it.

*To make
Pomanders.*

To make excellent strong Vinegar, you shall brew the strongest Ale that may be, and hauing tunned it in a very strong vessell, you shal set it either in your garden or some other safe place abroad, where it may haue the whole summer daies sunne to shine ypon it, and there let it lie till it be extreame sowre, then into a Hogshead of this Vinegar put the leaues of foure or fise hundred Damaske Roses, and after they haue layen for the space of a moneth therein, house the Vinegar and draw it as you neede it.

*To make
Vinegar.*

To make drie Vinegar which you may carry in your pocket, you shall take the blades of greene corne either Wheat or Ric, and beat it in a mortar with the strongest Vinegar you can get till it come to a paste; then role it into little balls, and dry it in the sunne till it be very hard, then when you haue any occasion to vse it, cut a little peece thereof and dissolue it in wine, and it will make a strong Vinegar.

*To make
dry vinegar.*

To make Veriuiue, you shall gather your Crabbs as
soone

To make
varnishes.

soone as the kernels turne blacke, and hauing laid them a while in a heape to sweat together, take them and picke them from stalkes, blacks and rottennesse: then in long troughs with beetles for the purpose, crush and breake them all to mash: then make a bagge of course haire-cloth as square as the presse, and fill it with the crushed Crabs; then put it into the presse, and presse it while any moysture will drop forth, hauing a cleane vessell vnderneath to receiue the liquor: this done, run it vp into sweet Hogsheds, and to euery Hogshed put halfe a dozen handfulls of Damaske Rose leaues, and then bung it vp, and spend it as you shall haue occasion.

Many other pretty secrets there are belonging vnto curious *House-wines*, but none more necessary then these already rehearsed, except such as shall hereafter follow in their proper places.

Additi-
ons

so conceiued
secrets.

To make
sweete pow-
der for
bags.

To make
sweete bags.

Take of Arras sixe ounces, of Damaske rose-leaues as much, of Margerom and sweete Basill, of each an ounce, of Cloues two ounces, yellow Saunders two ounces, of Citron pills seuen drams, of Lignum-aloes one ounce, of Beniamine one ounce, of Storaxe one ounce, of Muske one dram: bruiſe all these, and put them into a bagge of silke or linnen, but silke is the best.

Take of Arras foure ounces, of Gallaminis one ounce, of Ciris halfe an ounce, of Rose leaues dried two handfulls, of dried Marierom one handfull, of spike one handfull, Cloues one ounce, of Beniamine & Storaxe of each two ounces, of white Sandders and yellow of each one ounce: beate all these into a grosse powder, then put to it Muske a dram, of Ciuer halfe a dram, and of Ambergreece halfe a dram; then put them into a Tassata bag and vse it.

Take

Take of Bay leaues one handfull, of red Roses two handfulls of Damaske Roses three handfull, of Lauender foure handfulls, of Bafill one handfull, Mariorum two handfulls, of Camomile one handfull, the young tops of sweete Briar two handfulls, of Mandelion-tansy two handfulls, of Orange pils sixe or seuen ounces, of Cloues and Mace a groats-worth: put all these together in a pottle of new Ale in cornes for the space of three daies, shaking it euery day three or foure times; then distill it the fourth day in a still with a continuall soft fire, and after it is distilled, put into it a graine or to of Muske.

*To make
sweet water.*

Take a quart of Malmsey lees, or a quart of Malmsey simply, one handfull of Margerome, of Bassill as much, of Lauender foure handfulls, Bay leaues one good handfull, Damask-Rose leaues foure handfulls, and as many of red, the pils of sixe Oranges, or for want of them one handfull of the tender leaues of Walnut-trees, of Beniamine halfe an ounce, of Callamus Aramaticus as much, of Camphyr foure drams, of Cloues one ounce, of Baldamum halfe an ounce; then take a pottle of running water, and put in all these spices bruised into your Water and Malmsey together in a close stopped pot, with a good handfull of Rosemarie, and let them stand for the space of sixe dayes; then distill it with a soft fire; then let it in the Sunne sixteene dayes with foure graines of Muske bruised. This quantitie will make three quarts of water, *Probatum.*

*A very rare
and pleasant
Damaske
water.*

Take and brew very strong Ale, then take halfe a dozen gallons of the first running, & set it abroad to coole, and when it is cold, put Yest vnto it, and head it very strongly: then put it vp in a Firkin, and distill it in the Sunne; then take foure or fve handfull of Beanes, and parch them in a pan till they burst; then put them in as hot

*To make the
best vinegar.*

hot as you can into the firkin, and ſtop it with a little clay about the bung-hole : then take a handfull of cleane Ric leauen and put in the firkin ; then take a quantitie of Barberries, and bruiſe and ſtraine them into the firkin, and a good handfull of ſalt, and let them lie and worke in the Sun from May till Auguſt: then hauing the full ſtrength, take Roſe-leaues and clip the white ends off, and let them drie in the Sunne ; then take Elder-flowers and picke them, and dry them in the Sunne, and when they are dry, put them in bags, and keepe them all the Winter : then take a pottle-pot, and draw forth a pottle out of the firkin into the bottle, and put a handfull of the red roſe-leaues, and another of the Elder-flowers, and put into the bottle, and hang it in the Sunne, where you may occupie the ſame, and when it is emptie, take out all the leaues, and fill againe as you did before.

*To perfume
Gloves.*

Take Angelica-water and Roſe-water, and put into them the powder of Cloues, Amber-greece, Muske and Lignum Aloes, Beniamine and Callamus Aramattecus; boyle theſe till halfe bee conſumed ; then ſtraine it, and put your Gloves therein ; then hang them in the Sunne to drie, and turne them often ; and thus three times wet them, and drie them againe : or otherwiſe, take Roſewater and wet your Gloves therein, then hang them vp till they be almoſt drie ; then take halfe an ounce of Beniamine, and grind it with Oyle of Almons, and rub it on the Gloves till it be almoſt dried in : then take twentie graines of Amber-greece, and twentie graines of Muske, and grind them together with Oyle of Almons, and ſo rub it on the Gloves, and then hang them vp to drie, or elſe let them drie in your boſome, and ſo after uſe them at your pleaſure.

It is neceſſarie that our *English Houſ-wife* be ſkilfull in
the

the election, preservation and curing of all sorts of wines, because they be vsuall charges vnder her hands, and by the least neglect must turne the husband to much losse: therefore to speake first of the election of sweete wines, the must bee carefull that her Malmseys bee full Wines, pleasant, well hewed and fine: that Bastard be fat, and if it be tawny it skills not, for the tawny Bastards be alwaies the sweetest. Muskadine must bee great, pleasant and strong, with a sweete sent, and with Amber colour. Sacke if it bee Seres (as it should be) you shall know it by the marke of a corke burned on one side of the bung, and they be euer full gadge, and so are no other Sacks, and the longer they lie, the better they be.

Take a pleasant Butt of Malmsey, and draw it out a quarter and more; then fill it vp with fat Bastard within eight gallants, or there-about, and parill it with six eggs, yelks and all, one handfull of Bay-salt, and a pint of cumdrit water to eery parill, and if the wine be hie of colour, put in three gallants of new milke, but skim of the Creame first, and beate it well, or otherwise if you haue a good Butt of Malmsey, and a good pipe of Bastard, you must take some emptie Butt or pipe, and draw thirtie gallants of Malmsey, and as many of Bastard, and beate them together; and when you haue so done, take a quarter of a pound of Ginger and bruse it, and put it into your vessel; then fill it vp with Malmsey and Bastard: or otherwise thus; if you haue a pleasant Butt of Malmsey, which is called Ralt-mow, you may draw out of it fortie gallants, and if your Bastard be very faint, then thirtie gallants of it will serue to make it pleasant; then take foure gallants of new milke and beate it, and put into it when it lacketh twelke gallants of full, and then make your Flauer.

OF
The ordering,
preserving
and helping
of all sorts of
Wines, and
first of the
choise of
sweet Wines.

To make
Muskadine,
and give it a
Flauer.

How to flau-
ner Muska-
dine.

greatest
weight
to be
done
to the
best

To make
Muskadine
when it
comes new in
to be fined in
24 houres.

To make
white Ba-
stard.

Take one ounce of Collianders, of Bay salt, of Calburie
of each as much, one handfull of Sauorie; let all these be
blended and bruiled together, and sew them close in a
bag, and take halfe a pint of Damaske water and lay your
Flauer into it, and then put it into your Butt, and if it fine,
glue it a parill, and fill it vp, and let it lie till it fine: or else
thus; Take Colliander rootes a peniworth, one pound of
Any feedes, one peniworth in Ginger; bruise them toge-
ther and put it into a bag as before, and make your bagge
long and small that it may goe in and out at the bung-
hole, and when you doe put it in, fasten it with a thread at
the Bung; then take a pint of the strongest Damaske wa-
ter, and warme it luke-warme, then put it into the Butt,
and then stop it close for two or three dayes at least, and
then if you please you may let it abroach.

Take seuen Whites of new laid egges, two handfulls of
Bay-salt, and beate them well together, and put therein a
pint of Sacke or more, and beate them till they be as
thorn as Snow; then ouer-draw the Butt seuen or eight
gallans, and beate the Wine, and firre his Lees, and then
put in the parill and beate it, and so fill it vp, and stoppe it
close, and draw it on the morrow.

Draw out of a pipe of Bastard ten gallans, and put in
foue gallans of new milke, and skim it as before, and all to
beate it with a parill of eight Whites of Eggs, and a hand-
full of Bay-salt, and a pint of conduit water, and it will
be white and fine in the morning. But if you will make
verie fine Bastard, take a White wine hoghead, and put
out the Lees, and wash it cleane, and fill it halfe full and
halfe a quarter, and put to it foure gallans of new Milke
and beate it well with the Whites of fixe Egges, and
fill it vp with White wine and Sack, and it will be white
and fine.

Take

Take two gallons of the best stoned honey, and two gallons of White-wine, and boyle them in a faire pan, skim it cleane, and straine it thorow a faire cloth that there be no moats in it: then put to it one ounce of Colianders, and one ounce of Aniseedes, foure or five Orange-pils drie and beaten to powder, let them lie three dayes: then draw your Bastard into a cleane pipe, then put in your Honey with the rest, and beate it well; then let it lie a weeke and touch it not, after draw it at pleasure.

To helpe Bastard being seager.

If your Bastard be fat and good, draw out some gallons, then may you fill it vp with the laggs of any kind of White-wines or Sacks; then take five gallons of new milke, and first take away the Creame, then straine it through a cleane cloth, and when your pipe is three quarters full, put in your milke; then beate it very well, and fill it so, that it may lacke fifteene gallons, then aparill it thus: take the Whites onely of ten eggs, and beate them in a faire Tray with Bay-salt and conduit water; then put it into the pipe and beate it well, and so fill it vp, and let it stand open all night; and if you will keepe it any while, you must on the morrow stop it close, and to make the same drinke like Osley, giue it this flauer: Take a pound of Aniseedes, two pence in Colianders, two pence in Ginger, two pence in Cloues, two pence in graines, two pence in long Pepper, and two pence in Licoras: bruisse all these together; then make two baggs of linnen cloth, long and small, and put your Spices into them, and put them into the pipe at the bung, making them fast there with a thread that it may sinke into the Wine, then stop it close, and in two dayes you may broch it.

To make Bastard white, and to rid away Laggs.

Take and draw him from his Lees if he haue any, and put the Wine into a Malmsey Butt to the Lees of Malm-

A remedie for Bastard if it pricke.

sey, then put to the Bastard that is in the Malmsey Butt, nigh three gallons of the best Worte of a fresh tap, and then fill him vp with Bastard or Malmsey of Cute if you will; then aparell it thus; first, parell him, and beate him with a staffe, and then take the Whites of foure new-laid Egges, and beate them with a handfull of Salt till it bee short as mosse, and then put a pint of running water therein, and so fill the pipe vp full, and lay a tile-stone on the bung, and set it abroach within foure and twentie houres if you will.

*To make
Malmsey.*

If you haue a good Butt of Malmsey, and a Butt or two of Sacke that will not be drunke: for the Sacke prepare some emptie Butt or Pipe, and draw it more then halfe full of Sacke, then fill it vp with Malmsey, and when your Butt is full within a little, put into it three gallons of Spanish Cute, the best that you can get, then beate it well, then take your taster and see that it bee deepe coloured; then fill it vp with Sacke, and giue it a parell, and beate it well, the aparell is thus; Take the Yelkes of ten Egges and beate them in a cleane bason with a handfull of Bay-Salt, and a quart of conduir water, and beate them together with a little peece of Birch, and beate it till it bee as short as mosse; then draw ouer of sixe gallons out of your Butte, then beate it againe, and then fill it vp, and the next day it will be ready to be drawne. This aparell will serue both for Muscadine, Bastard and for Sacke.

*To shift
Malmsey,
and to rid
away ill
Wines.*

If you haue two principall Butts of Malmsey, you may make three good Butts with your laggis of Claret and of Sacke, if you put two gallons of Red wine in a Butt, it will sane the more Cute: then put two or three gallons of Cute as you see cause, and if it be Spanish Cute, two gallons will go further then five gallons of Candy Cute, but the Candy Cute is more naturall for the Malmsey:

also

also one Butt of good Malmsey, and a Butt of Sacke that hath lost his colour, will make two good Butts of Malmsey with the more Cute; and when you haue filld your Butts within twelue gallons, then put in your Cute, and beate it halfe an houre and more; then put in your parell and let it lie.

First, parell him as you did the Bastard, and order him as shall be shewed you for the White-wine of Gascoyne with Milke, and so set him abroach.

If your Sacke haue a strong ley or taste, take a good sweete Butt faire washed, and draw your Sack into it, and make vnto it a parell as you doe to the Bastard, and beate it very well, and so stop vp yout Butt: and if it be tawny, take three gallons of new Milke and straine it cleane, and put it into your Sacke, then beate it very well, and stop it close.

Take a faire empirie Butt with the Lees in it, and draw your Sacke into the same from his Lees fine; then take a pound of Rice-flower as fine as you can get, and foure graines of Camphire, and put it into the Sacke; and if it will not fine, giue it a good parell, and beate it well; then stop it and let it lie.

If any of your Sacks or White-wines haue lost their colour, take three gallons of new Milke, and take away the Creame; then ouer-draw your wine fine or fixe gallons, then put in your Milke and beate it; then lay it a foretarke all night, and in the morning lay it vp, and the next day if you will you may set it abroach.

Draw him out into fresh lees, and take three or foure gallons of stone-hony clarified, and being coole, put it in and parell it with the Yelkes of foure Egges, Whites and all, and beate it well, and fill it vp, and stop it close, and it will be pleasant and quick as long as it is in drawing.

*If Sack
want his
colour.*

*For Sack
that is
tawny.*

*For Sack
that doth
rape and is
browne.*

*To colour
Sacke, or
any White-
wine.*

*If Ale want
be growne
hard.*

*For Allegant
that is fower.*

Take three gallons of white Honey, and two gallons of Red-wine, boyle them together in a faire pan, and skim it cleane, and let it stand till it be fine and cold, then put it into your Pipe; yet nothing but the finest; then beate it well, and fill it vp, and stop it close, and if your Alligant be pleasant and great, it will doe much good, for one Pipe will rid away dimers.

*How to order
Renish wine.*

There are two sorts of Renish-wines, that is to say, *Elstertune* and *Brabant*: the *Elstertune* are best, you shall know it by the Fatt, for it is double bard and double pinned; the *Brabant* is nothing so good, and there is not so much good to bee done with them as with the other. If the Wines be good and pleasant, a man may rid away a Hogthead or two of White-wine, and this is the most vantage a man can haue by them: and if it be slender and hard, then take three or foure gallons of stone-honey and clarifie it cleane; then put into the Honey foure or five gallons of the same Wine, and then let it seeth a great while, and put into it two pence in Cloues bruised, let them seeth together, for it will take away the sent of Honie, and when it is sodden take it off, and set it by till it be thorow cold; then take foure gallons of Milke and order it as before, and then put all into your Wine and all to beate it; and (if you can) role it, for that is the best way; then stop it close & let it lie, and that wil make it pleasant.

*Of what
countries
VVines are
by their
names.*

The Wines that be made in *Burdeaux* are called *Gascoine* Wines, and you shall know them by their Hazell hoopes, and the most be full gadge and sound Wines.

The Wines of the hie countries, and which is called *Hie-country* wine, are made some thirtie or fortie miles beyond *Burdeaux*, and they come not downe so soone as the other; for if they doe, they are all forfeited, and you shall know them euer by their hazell hoopes,

hoopes, and the leghth gage lacks.

Then haue you Wines that be called *Gallaway* both in Pipes and Hogsheads, and be long, and lacks two Cernes in gadge and a halfe, and the Wines themselues are hie-coloured. Then there are other Wines which is called White-wine of *Angulle*, very good Wine, and lacks little of gadge, and that is also in Pipes for the most part, and is quarter bound. Then there are *Rochell* wines, which are also in Pipes long and slender; they are very small Hedge-wines, sharpe in taste, and of a pallad complexion. Your best Sacke are of *Seres* in *Spaine*, your smaller of *Galicia* and *Portugall*; your strong Sacks are of the *Islands* of the *Canaries*, and of *Malligo*; and your Muskadines and Malmseys are of many parts of *Italy*, *Greece*, and some especiall *Ilands*.

Euerie Terse is in depth the middle of the knot in the midst.

The depth of euery Hoghead is the fourth pricke above the knot.

The depth of euery Puncheon is the fourth prick next to the punchener.

The depth of euery Sack-Butt is the foure pricks next to the puncheon.

The depth of the Halfe Hoghead is at the lowest notch, and accounted one.

The depth of the halfe Terse is at the second notch, and is accounted two.

The depth of the halfe Hoghead and halfe pipe, is at the third notch, and accounted three.

The depth of the halfe Butt is at the forth notch, and accounted foure.

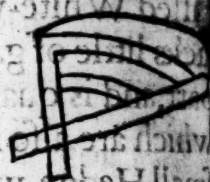
Notes of
gading of
Wines, Oyles
and Liquors.

The marks
of gadging.

1. The full gage is marked thus.



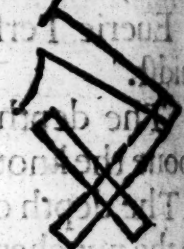
2. The halfe Sesterne lacking, thus.



3. The whole Sesterne lacking, thus.



4. The Sesterne and halfe lag.



5. The two Sesterne thus.



6. The two and a halfe Sesterne thus.



A Butte

But of Malmsey if he be ful gadge, is one hundred & twenty six gallons.

And so the tun is two hundred and fifty two gallons.

Euery Sesterne is three gallons.

If you sell for twelue pence a gallon, the tun is twelue pound, twelue shillings.

And Malmsey and Rhenish wine at tenne pence the gallon, is the tunne, ten pound.

Eight pence the gallon, is the tunne eight pounds.

Sixe pence the gallon, is the tunne six pounds.

Fiue pence the gallon, is the tunne fiue pound.

Four pence the gallon, is the tunne four pound.

Now for Gaswine wine there goeth foure hogsheds to a tun, & euery hoghead is sixty three gallons, the two hogsheds are one hundred twenty six gallons, and foure hogsheds are two hundred fifty two gallons; and if you sell for eight pence the gallon, you shall make of the tun eight pounds, and so forth looke how many pence the gallons are, and so many pounds the tunne is.

Now for Bastard it is at the same rate, but it laketh of gadge two Sesterne and a halfe, or three at a pipe, and then you must abate six gallons of the price, and so in all other wines.

See that in your choyce of Gascoine wines you obserue, that your Clarret wines be faire coloured, and bright as a Rubie, not deepe as an Amerist; for though it may shew strength, yet it wants neatnesse: also let it bee sweete as a Rose or a Violet, and in any case let it bee short; for if it bee long, then in no wise meddle with it.

For your white wines, see they bee sweete and pleasant at the nose, very short, cleere and bright and quick in the taste.

Lastly for your Red wine, prouide that they bee deepe

X

colou-

*The Contents
of all man-
ner of Gas-
coyne wine,
and others.*

*To chuse
Gascoyne
wines.*

coloured and pleasant, long, and sweete, and if in them, or Clarret wines be any default of colour, there are remedies enow to amend and repaire them.

*To remedy
Clarret
wine that
hath lost the
Colour.*

If your Clarret wine be faint, and haue lost his colour, then take a fresh hogf-head with his fresh lees which was very good wine, and draw your wine into the same, then stop it close & tight, and lay it a foretake for two or three daies that the lees may run through it, then lay it vp till it be fine, and if the colour bee not perfit, draw it into a red wine hogfhead, that is new drawne with the lees, & that will colour of himselfe, and make him strong; or take a pound of Tournsoll or two, & beat it with a gallon or two of wine, and let it lie a day or two, then put it into your hogfhead, draw your wine againe, and wash your clothes, then lay it a foretake all night, and rowle it on the morrow, then lay it vp, and it will haue a perfit colour.

*A remedy
for Gascoine
wine, that
hath lost his
colour.*

And if your Clarret wine haue lost his colour, take a peny worth of Damsens, or els black Bulleses, as you see cause, and stew them with some red wine of the deepest colour, & make thereof a pound or more of sirrop, and put it into a cleane glasse, and after into the hogfhead of Clarret wine; and the same may likewise doe vnto red wine if you please.

*A remedy
for white
wine, that
hath lost his
colour.*

And if your white wine be faint, & haue lost his colour, if the wine haue any strength in it; take to a hogfhead so much as you intend to put in, out of the said milke, and a handfull of Rice beaten very well, and a little salt, and lay him a foretake all night, and on the morning lay him vp againe, and set it abroch in any wise the next wine you spend, for it will not last long.

*For white
wine that
hath lost his
colour.*

Take three gallons of new milke, and take away the Creame off it; then draw five or six gallons of wine, & put your milke into the hogfhead, & beate it exceeding well; then

then fill it vp, but before you fill it vp, if you can, roule it, and if it bee long and small, take halfe a pound of Roche Allum finelie beaten into powder, and put into the vessell, and let it lie.

Take and draw it into new lees of the one nature, and then take a dozen of new pippins, and pare them, and take away the choares, and then put them in, and if that will not serue, take a handfull of the Oake of Ierusalem, and stampe it, then put it into your wine, and beate it exceedingly well, and it will not onely take away the foulness, but also make it haue a good sent at the nose.

If your Red wine drinke fainte, then take a hogthead that Allegant hath been in with the lees also, and draw your wine into it, and that will refresh it well, and make the wine wel coloured, or otherwise draw it close to fresh lees, and that will recouer it againe, and put to it three or foure gallons of Allegant, and turne it on his lees.

If your Red wine lacke colour, then take out foure gallons, and put in foure gallons of Allegant, and turne him on his lees, and the Bung vp, and his colour will returne, and be faire.

Take a good But of Malmsey, and ouerdraw it a quarter or more, and fill him vp with fat Bastard, and with Cure a gallon and more, then parrell him as you did your Malmsey.

Yow shall in all points dresse him, as you did dresse your Sacke, or white wine in the like case, and parrell him, and then set him abroach: And thus much touching wines of all sorts, and the true vse and ordering of them, so farre foorth as belongeth to the knowledge, and profit of our English Housewife.

*A remedy
for Clarret,
or white
wine that
drinks foule.*

*For red wine
that drinke
faint.*

*For red wine
that wants
colour.*

*To make
Tyre.*

*If Osey cō-
pleate, or
Caprock
haue lost
their colour.*

CHAP III.

Of Wooll, Hempo, Flaxe and Cloth, and Dying of Colours, of each severall substance, with all the knowledges belonging thereto.



Our English House-wife after her knowledge of preserving, and feeding her family, hath learne also how out of her owne induellours, shee ought to cloath them outwardly & inwardly; outwardly for defence from the cold and comelineffe to the person, and inwardly, for cleanlineffe and neatnesse of the skinne; whereby it may be kept from the filth of sweat, or vermine; the first consisting of woollen cloth, the latter of linnen.

Of making
woollen cloth.

Of sorting
wooll.

To speake then first of the making of woollen cloth, it is the office of the Husbandman at the sheering of his sheepe, to bestow vpon the House-wife such a competent proportion of wooll, as shall bee convenient for the clothing of his family; which wooll as soone as shee hath receiued it, shee shall open, and with a paire of sheeres (the fleece lying as it were whole before her) shee shall cut away all the course lockes, pitch, brands, tarr'd lockes, and other feltrings, and lay them by themselves for course Couerlids, or the like: then the rest so cleaned shee shall breake into peeces, and tose it every locke by locke, that is, with her hands open, and so diuide the wooll so, as not any part thereof may be feltered or close together, but all open and loose; then so much of the wooll as shee intends to spinne white, shee shall put by it selfe, and the rest which she intends to put into colours shee

she shall waigh vp, and diuide into seuerall quantities, according to the proportion of the webbe which she intends to make; and put euery one of them into a particular bagges made of netting, with talies or little peeces of wood fixed vnto them, with priuy markes thereon both for the waigher, the colour, and the knowledge of the same wooll when the first of four is altered: this done, she shall if she please send them vnto the Dyers, to bee dyed after her own fancy; yet for as much as I would not haue our *English Housewife* ignorant in any thing meete for her knowledge, I will shew her herre before I proceede any further, how shee shall dye her wooll her selfe into any colour meete for her use.

To dye wooll blacke. you shall take two pound of galls, and bruse them; then take halfe so much of the best Greene woperas; and boile them both together in two gallons of running water; then shall you put your wooll therein and boile it, so done, take it forth and drey it.

To dye wooll of a bright haire colour. first boile your wooll in Alum and water; then take it forth, and when it is cold, take Chamber-lie and Chimnie soote, and mixing them together well, boile your wooll againe therein, and stire it exceeding well about; then take it forth, and lay it where it may conveniently drie.

The dying of wooll.

To dye wooll blacke.

To dye wooll of haire colour.

If you would dye your wooll into a perfect redde colour, let it be in a panne full of water, when it is hot put in a peece of wheate branne, and let it boile a little; then put it into a tubbe, and put twice as much cold water vnto it; and let it stand vntill it bee a weeke old: hauing done so; then shall you put to tenne pounds of wooll, a pound of Alum; then heate your liquor againe, and

To dye wooll redde.

put in your Allum, and so soone as it is melted, put in your wooll, and let it boile the space of an houre: Then take it out againe, and then set on more bran and water: Then take a pound of Madder, and put in your Madder when the liquor is hot: when the Madder is broken, put in the Wooll and open it, and when it commeth to be very hot, then stirre it with a staffe, and then take it out and wash it with faire water; then set on the pan againe with faire water, and then take a pound of Saradine bucke, and put it therein, and let it boile the space of an egge seething: then put in the wooll, and stirre it three or foure times about, and open it well.

To die wooll
blew.

To die wooll blew; take good stoore of old Chamber lie, and set it on the fire; then take halfe a pound of blew Neale, and beate it small in a Morter; and then put it into the Lie; and when it seethes put in your wooll.

To die a
Puke.

To die wooll of a puke colour, take Galles, and beate them very small in a Morter, put them into faire seething water, and boile your wooll or your cloth therein, and boile them the space of halfe an houre: then take them vp, and put in your Copperas into the same liquor: then put in your wooll againe, and doing thus once or twice, it will be sufficient.

To die a Sim-
der colour.

If you will die your wooll of a sinder colour, you shall put your red wooll into your puke liquor; and then it will failelesse be of a sinder colour.

To die green
or yellow.

If you will die your wooll either green or yellow, then boile your Woodward in faire water, then put in your wooll or cloth, and that wooll which you put in white, will be yellow: and that wooll which you put in blew will be green, and all this with one liquor; provided that each be first boiled in Allom.

Handling of

When you haue thus dyed your worke into those feuerall

seuerall colours meet for your purpose, and haue also dried it well: then you shall take it forth, and roaste it ouer againe as you did before: for the first roasting was to make it receiue the colour or die: this second is to receiue the stile, and make it fit for spinning; which alsoone as you haue done, you shall mixe your colours together, wherein you are to note that the best medley, is that which is compounded of two colours only; as a light colour, and a darke: for to haue more is but confusion, and breeds no pleasure, but distraction to the sight: therefore for the proportion of your mixtures, you shall euer take two parts of the darker colour, and but a third part of the light. As for example, your web containes twelue pound, and the colours are red and Greene: you shall then take eight pound of the Greene wooll, and but foure pound of the red; and so of any other colours where there is difference of brightnes.

wooll after dying.

The mixing of colours.

But if it be so that you will needs haue your cloth of three colours, as of two darke and one light, or two light and one darke: As thus, you will haue Crimson, yellow, and puke; you shall take of the Crimson and yellow of each two pound, and of the puke eight pound: for this is two light colours to one darke; but if you will take a puke; a Greene and an orange tawny wich is too darke, and one light; then you shall take of the puke and Greene, and the orange tawny of each a like quantity; that is to say, of either foure pounds, when you haue equally diuided your proportions; then you shall spread vpon the ground a sheete, and vpon the same first lay a thinne layre or bed of your darker colour, all of one euen thickeesse: then vpon the same layre, lay another much thinner of the brighter quantity, being so neere as you can guesse it, hardly half so much as the darker: then couer it ouer with

Mixing of three colours.

another

with floure
or grease

grease and floure
as before

Of the oiling
of wooll.

The quanti-
ty of Oile.

another layre of the sad colour or colours againe, then up-
pon another of the bright againe. And: thus lay layre
vpon layre till all your wooll be spread; then beginning
at one end rolle it up round and hard together the whole
bed of wooll; and then causing one to knote hard vpon
on the ground, that it may not slide nor open, with your
hands toase, and pull out all the wooll in small peeces:
And then taking a paire of stocke Cards sharpe and large,
and bound fast to a forme, or such like thing, and on
the same Cardes, and Cardes shuer all the wooll, till you
see it perfectly, and vndistinctly mixed together, and
that indeed it is become one intire colour of diuers with-
out spots, or vnderidid locks or knots; in which doing
you shall bee very careful, and heedfull with your eyes.
And if you finde any halbe knot, or other felter in the
Wooll, which will not open, though it be neuer so small,
yet you shall picke it out and open it, or else being any
other fault cast it away: for it is the greatest Aun in House-
wifery to mixe these woolls right, and to make the Cloth
without blemish.

Your wooll being thus mixed perfectly together, you
shall then oile it; or as the plaine House-wife termes it,
grease it. In this manner being laid in a round flat bed,
you shall take of the best rape oile, or for want thereof ei-
ther wel raynd red Goose grease, or Swines grease, & ha-
uing melted it with your hand sprinkle it all ouer your
wooll, and worke it very well into the same: then turne
your wooll about, and doe as much on the other side, till
you haue oiled all the wooll ouer, and that there is not a
locke which is not moistened with the same.

Now for as much as if you shall put too much oile vp-
on the wooll, you may thereby doe great hurt to the
web, and make that the thread will not draw, but fall into

many

many pieces; you shall therefore be sure at the first to giue it little enough: and taking some thereof, proue it vpon the wheele: And if you see it drawes drie, and breaketh, then you may put more oile vnto it; but if it draw well, then to keepe it there without any alteration: but because you shall be a little more certaine in the truth of your proportions, you shall know, that three pound of grease or oile, will sufficiently annoint or grease ten pounds of wooll: And so according to that proportion you may oile what quantity you will.

After your wooll is oiled and annointed thus, you shall then tumme it; which is, you shall pull it foorth as you did before, when you mixe it, and card it ouer againe vpon your Stocke cards: and then those cardings which you strike off, are called tummings, which you shal lay by, till it come to spinning. There be some Houf-wiues which oile it as they mix it, and sprinkle euery layre as they lay it, and worke the oile well into it: and then rouling it vp as before said, pull it out, and tumme it, so that then it goeth but once ouer the stocke-Cards, which is not amisse: yet the other is more certaine, though somewhat more painefull.

Of the tumming of wooll.

After your wooll is thus mixed oiled and tummed, you shall then Spinne it vpon great Wooll wheelles, according to the order of good House-wifery; the action whereof must be got by practise, and not relation; onely this you shall be carefull, to draw your thread according to the nature, & goodnes of your wooll, not according to your particular desire: for if you draw a fine thread from a wooll which is of a course staple, it will want substance when it comes to the Walke Mill, and either there beat in pieces, or not being able to bed, and couer the threads well, be a cloth of a very short lasting. So likewise if you

Of spinning wooll.

draw a course thread from a wooll of a fine staple, it will then so much ouer thicke, that you must either take away a great part of the substance of your wooll in flocks; or els let the cloth weare course, and high, to the disgrace of good House-wifery, and losse of much cloth, which els might haue been saued.

The diuersities in spinning.

Now for the diuersities of spinning, although our ordinary *English House-wives* make none at all, but spin euery thread alike, yet the better experient make two manner of spinnings, and two sorts of thread; the one they call warpe, the other west, or els wooffe; the warpe is spunne close, round and hard twisted, being strong and well smoothed, because it runs thorough the sleies, and also endureth the fretting and beating of the beame, the west is spunne open, loose, hollow, and but halfe twisted; neither smoothed with the hand, nor made of any great strength, because it but only crosseth the warpe, without any violent straining, and by reason of the softnesse thereof beddeth closer, and couereth the warpe so well, that a very little beating in the Mill bringeth it to perfect cloth: and though some hold it lesse substantiall then the web, which is all of twisted yarn, yet experience finds they are deceived, and that this open west keeps the Cloth longer from fretting and wearing.

Winding of woollen yarne.

After the spinning of your wooll, some House-wives vse to wind it from the broche into round clewes for more ease in the warping, but it is a labour may very well be saued, and you may as well warpe it from the broche as from the clew, as long as you know the certaine waight, for by that onely you are to bee directed in all manner of cloth making.

Of warping Cloth.

Now as touching the warping of cloth, which is both the skill and action of the Weauer, yet must not our English

English House-wife be ignorant therein, but though the doing of the thing be not proper vnto her, yet what is done must not be beyond her knowledge, both to bridle the fallshood of vnconscionable workemen, and for her owne satisfaction, when shee is rid of the doubt of anothers euill doings. It is necessary then that shee first cast by the waight of her wooll, to how many yards of cloth the web will arise: for if the wooll bee of a reasonable good staple, and well spunne, it will runne yard and pound, but if it be course, it will not runne so much.

Now in your warping also, you must looke how manie pounds you lay in your warpe, and so many you must necessarily preferue for your weft; for Hus-wives say the best cloth is made of euen and euen; for to driue it to greater aduantage is hurtfull to the cloth: there be other obseruations in the warping of cloth; as to number your portulles, and know how many goes to a yard: to looke to the closenes, and fulling of the sleie, and such like, which sometimes hold, and sometimes faile, according to the art of the Workeman; and therefore I will not stand much vpon them; but referre the Hus-wife to the instruction of her owne experience.

Now after your cloth is thus warped, and deliuered vp into the hands of the Weauer, the Hus-wife hath finisht her labour: for in the weauing, walking, and dressing thereof shee can challenge no property more, then to intreate them seuerally to discharge their duties with a good conscience; that is to say, that the Weauer weaue it close, strong, and true, that the Walker or Fuller, mill it carefully, and looke well to his scowring-earth, for feare of beating holes into the cloth; and that the Clothworker, or Shereman burle, and dresse it sufficiently, neither cutting the wooll too vnreasonable high, whereby the

*Of weauing
cloth, wal-
king & dres-
sing it.*

cloth may weare rough, nor too low, lest it appeare thread bare ere it come out of the hands of the Tailor. These things foreward and performed, the cloth is then to be vsed at your pleasure.

*Of linnen
cloath.*

The next thing to this, which our English House-wife must be skilfull in the making of all sorts of linnen cloth, whether it bee of hemp or flaxe, for from those two only is the most principall cloth deriued, and made both in this, and in other nations.

*The ground
best to sow
hemp on.*

And first touching the soile fittest to sow hempe vpon, it must be a rich mingle earth of clay and sand, or clay and grauell well tempered: and of these the best serueth best for the purpose, for the simple clay, or the simple sand are nothing so good; for the first is too tough, too rich, & too heauy, bringeth forth al bun, & no rinde, the other is too barren, too hot, & too light, & bringeth forth such slender withered increase, that it is nothing neere worth the labor: briefly then the best earth is the best mixt ground which Husband-men cal the red hazel ground, being well ordered & manured: and of this earth a principall place to sow hempe on, is in old stackeyards, or other places kept in the winter time for the laire of sheep or cattell, when your ground is either scarce, or formerly not imploid to that purpose; but if it be where the ground is plenty, and only vsed thereunto, as in *Holland*, in *Lincolneshire*, the Ile of *Apham*, and such like places, then the custome of the country will make you expert enough therein: there bee some that will preferue the ends of their corne lands, which but vpon grasse for to sow hempe or flax thereon, and for that purpose will manure it well with sheepe; for whereas corne which butteth on grasse hads, where cattel are teathered is commonly destroied, and no profit issuing from a good part thereof; by this meanes, that wich is
sowen

sowen will bee more safe and plentifull, and that which was destroyed, will beare a commodity of better valew.

Now for the tillage or ordering of the ground where you sow hempe or flaxe, it would in al points be like vnto that where you sow barlie, or at the least as often broke vp, as you doe when you sow fallow wheat, which is thrice at least, except it bee some very mellow, and ripe mould, as stackyards, and vsuall hempelands be, and then twice breaking vp is sufficient; that is to say, about the latter end of *February*, and the latter end of *Aprill*; at which time you shall sow it: and herein is to bee noted, that you must sow it reasonable thicke with good sound and perfect seed, of which the smoothest, roundest, and brightest with least dust in is the best: you must not lay it too deepe in the Earth, but you must couer it close, light, and with so fine a mould as you can possible breake with your Harrowes, clotting-beetles, or sleighting: then till you see it appeare aboue the earth, you must haue it exceedingly carefully tended, especially an houre or two before Sun rise, and as much before it set, from birds and other vermine, which wil otherwise picke the seed out of the earth, and so deceiue you of your profit.

*The tillage
of the ground.*

*Of sowing of
hempe or
flaxe,*

Now for the weeding of hempe, you may saue the labour, because it is naturally of it selfe swift of growth, rough, and venemous to any thing that growes vnder it, and will sooner of its own accord destroy those vnwholsome weeds then by your labour: But for your Flaxe or line which is a great deale more tender, and of harder encrease, you shall as occasion serueth weed it, and trimme it, especially if the weeds ouer grow it, but not otherwise: for if it once get aboue the weeds, then it will saue it selfe.

*Of weeding
hempe and
flaxe.*

Touching the pulling of Hempe or Flaxe, which is

*The pulling
of hempe or
the flaxe.*

the manner of gathering of the ſame: you ſhall vnderſtand that it muſt bee pulled vp by the rootes, and not cut as Corne is, either with ſithe or hooke: and the beſt time for the pulling of the ſame is, when you ſee the leaues fall downeward, or turne yellow at the tops, for then it is full ripe, and this for the moſt part will be in *Iuly*, and about *Mary Maudlins* day. I ſpeake now touching the pulling of hemp for cloth: but if you intend to ſaue any for ſeed, then you ſhall haue the principall bunnes, and let them ſtand till it be the latter end of *Auguſt*, or ſometimes till mid *September* following: and then ſeeing the ſeed turned browne and hard, you may gather it, for if it ſtand longer, it will ſhed ſuddenly: as for flax, which ripeneth a little after the hempe, you ſhall pull it as ſoone as you ſee the ſeed turne browne, and bend the head to the earthward, for it will afterward ripen of it ſelfe as the bunne drieth.

The ripening of hemp and flaxe.

Now for the ripening, and ſeaſoning of Hempe or Flaxe, you ſhall ſo ſoone as you haue pulled it, lay it all along flat, and thinne vpon the ground, for a night and a day at the moſt, and no more; and then as Houſ-wifes call it, tie it vp in baies, and reare them vpright till you can conueniently carry it to the water, which would be done as ſpeedily as may bee. Now there be ſome which ripen their Hempe and Flaxe vpon the ground where it grew, by letting it lie thereon to receiue dewes and raine, and the moiſtneſſe of the earth, till it bee ripe; but this is a vile and naughty way of ripening, it making the Hempe or Flaxe blacke, rough, and often rotten: therefore I would wiſh none to vſe it, but ſuch as neceſſity compelleth therunto, and then to be carefull to the often turning thereof, for it is the ground onely which rots it.

The watering of hemp or flaxe.

Now for the watering of the Hempe or Flaxe, the beſt water

water is the running streame, and the worst the standing pit; yet because Hempe is a poisonous thing, and infecteth the water; and destroyeth all kinde of Fish, it is more fit to employ such pits and ditches as are least subiect to annoiance, except you liue neere some great broad and swift streame, and then in the shallow parts thereof, you may water without danger: touching the manner of the watering thereof, you shall according to the quantity, knocke fowre or six strong stakes into the bottome of the water, and set them square-wise, then lay your round baits or bundles of Hempe downe vnder the water, the thick end of one bundle one way, and the thick ends of another bundle another way; and so lay baite vpon baite till you haue laid in all, and that the water couereth them all ouer; then you shall take ouer-lyers of wood, and binding them ouerthwart to the stakes, keepe the Hempe downe close, and especially at the foure corners; then take great stones, grauell, and other heauy rubbish, and lay it betweene, and ouer the ouer-lyers, and so couer the Hempe close that it may by no meanes stirre, and so let it continue in the water foure daies and nights, if it be in a running water, but if it be in a standing water, then longer, and then take out one of the vppermost baits and wash it; and if in the washing you see the leafe come of, then you may be assured the hemp is watred enough: as for flax, les time will serue it, and it will shed the leafe in three nights.

When your Hemp or Flaxe is thus watred enough, you shall take off the grauell, stones, ouer-lyers of wood, and vnloosing it from the stakes, take and wash out euery baite or bundle seuerall by it selfe, and rub it exceeding cleane, leauing not a leafe vpon it, nor any filth within it; then set it vpon the drie earth vpright that the water may drop from it, which done, load it vp, & carry it home, and in some open Close or peece of ground reare it vpright either

*The time it
shall lie in
the water.*

*Of washing
out of Hempe
or Flaxe.*

either againſt hedges, pales, walls, backſides of houſes, or ſuch like, where it may haue the full ſtrength, or reflection of the ſun, and being thoroughly dried, then houſe it; yet there be ſome Houſ-wiues which as ſoon as their Hempe comes from the water, will not reare it vpright, but lay it vpon the ground flat & thin for the ſpace of a fortnight, turning it at the end of euery two daies; firſt on the one ſide, then on the other, & then after reare it vpright, drie it, & ſo houſe it, and this houſ-wifery is good & orderly.

Speciall ordering of Flaxe.

Now although I haue hitherto ioyned Hempe and Flaxe together, yet you ſhal vnderſtãd that there are ſome particular differences betweene them; for whereas your Hemp may within a night or two after the pulling be carried to the water, your flaxe may not, but muſt be reared vp, and dried and withered a week or more to ripen the ſeed, which done, you muſt take ripple combs, and ripple your flaxe ouer, which is the beating, or breaking off from the ſtalks the round bels or bobs, which containe the ſeed which you muſt preſerue in ſome drie veſſell or place, till the ſpring of the yeere, and then beate it, or thresh it for your uſe, and when your Flaxe or line is ripled, then you muſt ſend it to the water as aforeſaid.

The braking for Hempe Flaxe.

After your Hempe or Flaxe hath been watered, dried, & houſed, you may then at your pleaſure breake it, which is in a brake of wood (whoſe proportiõ is ſo ordinary, that euery one almoſt knowes them) breake and beate out the drie bun, or kexe of the Hempe and Flaxe from the rinde which couers it, and when you brake either, you ſhal do it, as neer as you can, on a faire drie ſun-ſhine day, obſeruing to ſet forth your hemp and Flaxe, and ſpread it thin before the ſun, that it may be as drie as tinder before it come to the brake; for if either in the lying cloſe together it ſhall giue againe or ſweat, or through the moiſtneſſe of
the

the ayre or place where it lies receiues any dampishnesse, you must necessarily see it dried sufficiently againe, or else it will neuer brake well, nor the bun brake and part from the rinde in order as it should: therfore if the weather be not seasonable, and your need much to vse your hempe or flaxe, you shall then spread it vpon your kilne, and making a soft fire vnder it, drie it vpon the same, and then brake it: yet for as much as this is oft-times dangerous, & much hurt hath bin receiued thereby through casualty of fire, I would wish you to stick foure stakes in the earth at least fiue foote aboue ground, and laying ouer them small our-layers of wood, and open fleaks or hurdles vpon the same, spread your Hempe, and also reare some round about it all, but at one open side; then with straw, small shauing, or other light drie wood make a soft fire vnder the same, and so drie it, and brake it, and this is without all danger or mistrust of euill; and as you brake it, you shall open and looke into it, euer beginning to brake the roote ends first; and when you see the bun is sufficiently crusht, salne away, or at the most hangeth but in very small shiuers within the Hempe or Flaxe, then you shall say it is brak't enough, and then tearing that which you called a baite or bundle before, now a strike, you shall lay them together and so house them, keeping in your memorie either by score or writing, how many strikes of Hempe, and how many strikes of flaxe you brake vp euery day.

Now that your Hempe or Flaxe may brake so much the better, you must haue for each seuerall sort two seuerall brakes, which is an open and wide toothed, or nickt-brake, and a close and straight toothed brake: the first being to crush the bun, and the latter to beate it forth. Now for Flax you must take first that which is the straightest for the Hempe, and then after one of purpose, much

Z

straighter

*The drying of
hēp or flaxe.*

*When it is
brak't en-
ough.*

*Diversity of
brakes.*

ſtraighter and ſharper for the bunne of it being more ſmall, tough and thinne; muſt neceſſarily be broken into much leſſe peeces.

*Of ſwing-
ling hempe
and flaxe.*

After your Hempe and Flaxe is brak't, you ſhall then ſwingle it, which is vpon a ſwingle tree block made of an halfe inch boord about fowre foote aboue ground, and ſet vpon a ſtrong foot or ſtocke, that will not eaſily moue and ſtirre, as you may ſee in any Houſ-wiues houſe whatſoeuer better then my words can expreſſe; and with a peece of wood called the ſwingle tree dagger, and made in the ſhape and proportion of an old dagger with a reaſonable blunt edge; you ſhall beate out all the looſe buns and ſhiuers that hang in the Hempe or Flaxe, opening and turning it from one end to the other, till you haue left no bunne or ſhauer to be perceiued therein, and then ſtrike a twiſt, and fould in the miſt, which is euer the thickeſt part of the ſtrike, lay them by till you haue ſwingled all; the generall profit whereof, is not onely the beating out of the hard bunne, but alſo an opening, and ſoftning of the teare, whereby it is prepared and made ready for the maker.

*Uſe of ſwin-
gle wee firſt
ſayds.*

Now after you haue ſwingled your Hempe and Flaxe ouer once, you ſhall take and ſhake vp the reſuſe ſtuſſe, which you beate from the ſame ſeuerally, and not only it, but the tops and knots, and halfe brak't buns which fall from the brake alſo, and drying them againe cauſe them to bee very well threſht with flayles, and then mixing them with the reſuſe which fell from the ſwingle tree, dreſſe them all well with threſhing and ſhaking, till the buns be cleane driuen out of them; and then lay them in ſome ſafe drie place till occaſion of uſe: theſe are called ſwingle tree hurds, and that which comes from the hemp will make window-cloth, and ſuch like courſe ſtuſſe, and that

that which comes from the flax being a little towed again in a paire of wooll cards will make a course hardingl

But to proceed forward in the making of cloth; after your hempe or flax hath bin swingled once ouer, which is sufficient for the market, or for ordinary sale, you shall then for cloth swingle it ouer the second time, and as the first did beat away the bun, and soften the rinde, so this shall break and diuide, and prepare it fit for the heckle; & hurds which are this second time beaten off, you shall also saue; for that of the hempe (being toased in wool cards) wil make a good hempen hurden) & that comming from the flaxe (vsed in that manner) a flax hurden better then the former.

The second swingling.

After the second swingling of your Hempe, and that the hurds thereof haue been laid by, you shall take the strikes, and diuiding them into dozens, or halfe dozens, make them vp to great thicke roles, and then as it were broaching them, or spitting them vpon long stickes, set them in the corner of some chimney, where they may receiue the heate of the fire, and there let them abide, till they bee dried exceedingly, then take them, and laying them in a round trough made for the purpose, so many as may conueniently lie therein, and there with beetles beat them exceedingly, till they handle both without & within as soft and pliant as may be, without any hardnesse or roughnesse to be felt or perceiued; then take them from the trough, and open the roler, and diuide the strikes severally as at the first, and if any be insufficiently beaten, role them vp, and beat them ouer as before.

Of beating hempe.

When your Hempe hath been twice swingled, dried, and beaten, you shall then bring it to the heckle, which instrument needeth no demonstration, because it is hardly vnknown to any woman whatsoever; and the first Heckle shall be course, open and wide toothed, because it is the

Of heckling hempe.

first breaker or diuider of the ſame, and the layer of the ſtrikes euen & ſtraight; and the hurds which come of this heckling you ſhall mixe with thoſe of the latter ſwingling, & it will make the cloth much better; then you ſhall heckle it the ſecond time through a good ſtraight heckle made purpoſely for hemp, & be ſure to break it very wel and ſufficiently therupon, & ſaue both the hurds by themſelues, and the ſtrikes by themſelues in ſeuerall places.

Now here bee ſome very principall good Huſ-wiues, which uſe only but to heckle their hemp once ouer, affirming, that if it be ſufficiently dried and beaten, that once going ouer through a ſtraight heckle will ſerue without more loſſe of labour, hauing been twice ſwingled before.

*Dreſſing of
hempe more
fine.*

Now if you intend to haue an excellent peece of hempen cloth, which ſhall equall a peece of very pure linnen, then after you haue beaten it, as before ſaid, and heckled once ouer, you ſhall then role it vp againe, drie it as before, and beat it againe as much as at the firſt; then heckle it through a fine flaxen heckle, and the towe which falles from the heckle, will make a principall hemping, but the Teare it ſelfe a cloth as pure, as fine Huſ-wifes linnen, the indurance and laſting whereof, is rare & wonderfull; thus you ſee the ytermoſt art in dreſſing of hemp for each ſeuerall purpoſe in cloth making till it come to the ſpinning.

*Of heckling
flaxe.*

Flax after it hath been twice ſwingeld needeth neither more drying nor beating as hempe doth, but may bee brought to the heckle in the ſame manner as you did hempe; onely the heckle muſt be much finer and ſtraiter; and as you did before the firſt heckle being much courſer then the latter, holding the ſtrike ſtiſſe in your hand, breake it very well vpon that heckell: then the hurdes which come thereof, you ſhall ſaue to make fine hurden cloth of, and the ſtrike it ſelfe you ſhall paſſe through a fi-

ner heckle, and the hurds which come from thence, you shall saue to make fine midlen cloth of, and the teare it selfe for the best linnen.

To dresse Flaxe for the finest vse that may mee, as to make faire Holland cloth of great price, or thread for the most curious purpose, a secret hitherto almost concealed from the best Hus-wives; you shall take your flaxe after it hath been handled, as is before shewed, and laying three strikes together, plat them in a plat of three so hard and close together as it is possible, ioining one to the end of another, till you haue platted so much as you thinke conuenient, and then begin another plat, and thus plat as many feueral plats as you thinke will make a role, like vn-to one of your Hempe roubles before spoke off, and then wreathing them hard together, make vp the rouble; and so many roubles more or lesse, according to the purpose you dresse them for: This done, put the roubles into a hempe trough, and beat them soundly, rather more then lesse the hempe: and then open and vnplat it, and diuide euery strike from other very carefully; then heckle it through a finer heckle then any formerly vsed: for of heckles there be euer three sorts, and this must be the finest: and in this heckling you must bee exceeding carefull to doe it gently, lightly, and with good deliberation, least what you heckle from it should runne to knots, or other hardnes, as it is apt to doe: but being done artificially as it ought, you shall see it looke, & feele it handle like fine soft cotton, or Iersey wooll; and this which thus looketh and feeleth, and falleth from the heckle, will notwithstanding make a pure fine linnen, and runne at least two yards and a halfe in the pound; but the teare it selfe will make a perfect strong, and most fine holland, running at least fise yards in the pound.

*The dressing
of flaxe. to
the finest vse*

Of the spinning of hemp.

After your teare is thus drest, you shall spinne it either vpon wheele or rocke, but the wheele is the swifter way, & the rocke maketh the finer thread; you shall draw your thread according to the nature of the teare, and as long as it is euen, it can not be to small, but if it be vneuen it will neuer make a durable cloth. Now for as much as euery Hus-wife is not able to spinne her owne teare in her owne house, you shall make choice of the best Spinners you can heare of, and to them put foorth your teare to spinne, waighing it before it goe, and waighing it after it is spun and drie, allowing waight for waight, or an ounce and a halfe for wast at the most: as for the prises for spinning, they are according to the natures of the country, the finesse of the teare, and the dearenesse of prouisions: some spinning by the pound, some by the lay, and some by day, as the bargaine shall be made.

Of reeling yarne.

After your yarne is spunne vpon spindles, spooles, or such like; you shall then reele it vpon reeles, of which the reeles which are hardly two foot in length, and haue but onely two contrary crosse barres are the best, the most easie and least to be troubled with rauelling; and in the weauing of your fine yarne to keepe it the better from rauelling, you shal as you reele it, with a Ley band of a bigtwist, diuide the slipping or skeane into diuers Leyes, allowing to euery Ley 80. threads, and 20. Laies to euery slipping, the yarne being very fine, otherwise lesse of both kinds: but if you spinne by the Ley, as at a ob. a Ley or so, then the ancient custome hath been to allow to a reele which was 8. yards, all about 160. threads to euery Ley, and 25 Leyes, and sometimes 30 Leyes to a slipping, which will ordinarily amount to a pound or thereabouts; and so by that you may proportion foorth the price for any manner of spinning whatsoeuer: for if the best thus,

then

then the 2. so much bated; and so accordingly the worst.

After thus your yarne is spunne and reeld, being in the slipping you shall scowre it: Therefore first to fetch out the spottes, you shall lay it in luke warme water, and let it lie so three or foure daies, each day shifting it once, and wringing it out, and laying it in another water of the same nature; then carry it to a well or brooke, and there rinse it, till you see that nothing commeth from it, but pure cleane water; for whilst there is any filth within it, there will neuer be white cloth: which done take a bucking tub, & couer the bottome thereof with very fine Ashen ashes: then opening your slippings, and spreading them, lay them on those ashes; then couer those slippings with ashes againe, then lay in more slippings, and couer them with ashes as before, and thus lay one vpon another; till all your yarne be laid in; then couer the vppermost yarne with a bucking cloth, and lay therein a pecke or two (according to the bignes of the tub) of ashes more: then poure into all through the vppermost cloth so much warme water, till the tub can receiue no more; and so let it stand al night: the next morning, you shall set a kettle of cleane water on the fire; and when it is warme, you shall pull out the spigget of the bucking tubbe, and let the water therein runne into another cleane vessell, and as the bucking tubbe wasteth, so you shall fill it vp againe with the warme water on the fire, and as the water on the fire wasteth, so you shall fill it vp againe with the lie which commeth from the bucking tubbe, euer obseruing to make the lie hotter and hotter till it seeth; and then when it so seetheth, you shall as before apply it with boiling lie, at least foure houres together; which is called, the driuing of a Buck of yarne: All which being done you shall take off the Bucking-cloth, and then putting the yarne with the lie ashes into

Of the scowring of yarne

Bucking of yarne.

large

*Whitening
of yarne.*

large tubbes or boales, with your hands as hot as you can suffer it to possesse, and labor the yarne, ashes, and lie a pretty while together; then carry it to a well, riuer, or other cleane scouring water, and there rinse it as cleane as may be from the ashes, then take it, and hang it vp vpon poales abroad in the aire all day, and at night take the slippings downe, and lay them in water all night, then the next daie hang them vp again, and if any part of them drie, then cast water vpon them, obseruing euer to turne that side outmost which whiteth slowest, and thus doe at least seuen daies together, then put all the yarne againe into a bucking tub without ashes, and couer it as before with a bucking cloth, and lay thereupon good store of fresh ashes, and driue that buck as you did before, with very strong seething lies, the space of half a daie or more, then take it forth, possesse it, rinse it, and hang it vp as you did before on the daies, and laying it in water on the nights another weeke, and then wash it ouer in faire water, and so drie it vp: other waies there are of scouring and whitening of yarne; as steeping it in branne and warme water, and then boiling it with *Ozier* sticks, wheat-straw water and ashes, and then possing, rinsing, and bleaching it vpon hedges, or bushes; but it is a foule and vncertaine waie, and I would not wish any good House-wife to vse it.

*Of winding
yarne.*

After your yarne is scoured and whited, you shall then winde it vp into round bals of a resonable bignesse, rather without bottomes then with any at all, because it may deceiue you in the waight; for according to the pounds will arise your yards and lengths of cloth.

*Of warping
and meaning.*

After your yarne is wound and waighed, you shall carry it to the Weauers, and warpe it as was before shewed for wollen cloth, knowing this, that if your Weauer bee honest

honest and skilfull hee will make you good and perfect cloth of euen and euen, that is iust the same waight in weft that then was in wrap; as for the action of weauing it selfe, it is the worke-mans occupation, and therefore to him I referre it.

After your cloth is wouen, and the web or webs come home, you shall first lay it to steepe in all points as you did your yarne, to fetch out the soyling and other filth which is gathered from the Weauer; then rinse it also as you did your yarne, then bucke it also in lie and ashes as before said, and rinse it, and then hauing loops fixt to the seluedge of the cloth spread it vpon the grasse, and stake it downe at the vttermost length and breadth, and as fast as it dries water it againe, but take heed you wet it not too much, for feare you milde or rot it, neither cast water vpon it till you see it in manner drie, and be sure weekly to turne it first on one side, & then on the other, and at the end of the first weeke you shall buck it as before in Lie and Ashes; againe then rinse it, spread it, and water it as before; then if you see it whites apace, you need not to giue it any more bucks with the ashes and the cloth mixt together: but then a couple of cleane bucks (as was before shewed in the yarne) the next fortnight followings; and then being whitened enough, drie vp the cloath, and vse it as occasion shall require; the best season for the same whitening being in *Aprill* and *May*. Now the course and worst huswifes scoure and white their cloath with water and branne, and buck it with lie and greene hemlocks: but as before I said, it is not good, neither would I haue it put in practise. And thus much for Wool, Hempe, Flax, and Cloth of each seuerall substance.

*The scouring
and whiting
of Cloth.*

CHAP. III.

Of Dairies, Butter, Cheefe, and the neceſſarie things belonging to that Office.

Of Kine.

Here followeth now in his place after theſe knowledges alreadie rehearſed, the ordering and gouernment of Dairies, with the profits and commodities belonging to the ſame. And firſt touching the ſtocke wherewith to furniſh Dairies, it is to be vnderſtood that they muſt be Kine of the beſt choice and breed that our Engliſh houſwife can poſſibly attain vnto, as of big bone, faire ſhape, right bred, and deep of milke, gentle, and kindly.

Bigneſſe of Kine.

Touching the bigneſſe of bone, the larger that euery cow is, the better ſhe is: for when either age, or miſchance ſhall diſable her for the paile, being of large bone ſhe may be fed, and made fit for the ſhambles & ſo no loſſe, but profit, and any other to the paile as good and ſufficient as her ſelfe.

Shape of Kine.

For her ſhape it muſt a little differ from the Butchers rules; for being choſe for the Dairie, ſhe muſt haue all the ſignes of plenty of milke, as a crumpled horne, a thimne necke, a hayrie dewlappe, and a very large vdder, with foure teats, long, thicke, and ſharpe at the ends, for the moſt part either all white, of what colour ſoeuer the cow be; or at leaſt the fore part thereof, and if it bee well haird before and behinde, and ſmooth in the bottome, it is a good ſigne alſo.

The breed of Kine.

As touching the right breed of Kine through our nation generally affoordeth very good ones, yet ſome countries doe farre exceed other countries; as *Cheſſhire, Lancaſhire,*

ca. shire, Yorke-shire, and Darbie-shire for blacke Kine; Gloucester-shire, Somerset-shire, and some part of wilt-shire for red Kine, and Lincolne-shire pide kine: and from the breeds of these Countries generally doe proceed the breeds of all other, howsoever disperled ouer the whole Kingdome. Now for our huswifes direction, she shall choose her dairie from any of ther best breeds before named, according as her opinion and delight shall gouerne her, onely obseruing not to mix her breeds of diuers kindes, but to haue all of one intire choice without variation, because it is vnprofitable; neither must you by any meanes haue your Bull a forrener from your Kine, but absolutely either of one Countrie, or of one shape and colour: Againe, in the choice of your Kine you must looke diligently to the goodnesse and fertility of the soile wherein you liue, and by all meanes buy no Kine from a place that is more fruitful then your owne, but rather harder; for the latter will prosper and come on, the other will decay and fall into disease; as the pissing of blood, & such like, for which disease and all other you may finde assured cures in a little booke I published, called *Cheape and good*.

For the depth of milke in Kine (which is the giuing of most milke) being the maine of a Hus-wifes profit, shee shall be very carefull to haue that quallity in her beasts.

*Depth of
milke in
Kine.*

Now those Kine are said to be deepest of milke, which are new bare; that is, which haue but lately calued, and haue their milke deepe springing in their vdders, for at that time she giueth the most milke; and if the quantity then be not conuenient, doubtles the cow cannot be said to be of deep milch: and for the quantity of milke, for a Cow to giue two gallons at a meale, is rare, and extraordinarie; to giue a gallon and a halfe is much, and conuenient, and to giue but a gllon certain is much, and not to be found

*Quantity of
Milke.*

*Of the going
way of Kine.*

fault with: againe those Kine are said to be deepe of milke, which though they giue not so exceeding much milke as others, yet they giue a reasonable quantity, and giue it long as all the yeer through, whereas other Kine that giue more in quantity, will goe drie, being with calf some three moneths, some two, and some one, but these will giue their vsual measure, even the night before they calue, and therefore are said to be Kine deepe of milke. Now for the retained opinion, that the Cow which goeth not drie at all, or very little, bringeth not forth so good a Calf as the other, because it wanteth much of the nourishment it should enioy, it is vaine and friuolous; for should the substance from whence the milke proceedeth conuert to the other intended nourishment, it would be so superabundant, that it would conuert either to disease, or putrefaction: but letting these secret reasons passe, there be some kine which are so exceedingly full of milke, that they must be milkt at least thrice a day, at morning, noone, and evening, or else they will shed their milke, but it is a fault rather then a vertue, & proceedeth more from a laxatiuenesse or loosenesse of milke, then from any abundance; for I neuer saw those three meales yet equall the two meales of a good Cow, and therefore they are not truly called deepe of milke.

*Of the gentleness of
Kine.*

Touching the gentlenesse of kine, it is a vertue as fit to be expected as any other; for if she be not affable to the maide, gentle, & willing to come to the paille, and patient to haue her duggs drawne without skittishnesse, striking or wildnesse, shee is vtterly vnfitte for the dayrie.

*Of kindlines
in Kine.*

As a Cow must be gentle to her milker, so she must bee kind in her owne nature; that is, apt to conceiue, and bring forth, fruitfull to nourish, and louing to that which springs from her; for so she bringeth forth a double profit;

fit; the one for the time present which is in the dairy; the other for the time to come; which is in the maintenance of the stocke; and vpholding of breede.

The best time for a Cow to calue in for the Dairie, is in the later end of *March*, and all *April*; for then grasse beginning to spring to its perfect goodnesse, will occasion the greatest increase of milke that may be; and one good early Cow will countervaille two later, yet the calves thus calued are not to be reared, but suffered to feed vpon their Dammes best milke, and then to be sold to the Butchers, and surely the profit will equall charge; but those Calves which fall in *October*, *November*, or any time of the depth of winter may well be reared vp for breede, because the maine profit of the dayrie is then spent, and such breede will hold vp and continue the stocke, provided that you reare not vp any calves which are calued in the prime daies, for they generally are subiect to the disease of the sturdy, which is dangerous and mortall.

The best time to calue in, for the dairy or breede.

The Housewife which only hath respect to her Dairy, and for whose knowledge this discourse is written (for we haue shewed the *Grasser* his office in the *English Husband-man*) must reare her Calves vpon the finger with floten milke, and not suffer them to run with the dammes, the generall manner whereof, and the cure of all the diseases incident to them and all other cattell is fully declared in the booke called *Cheape and good*.

Rearing of Calves.

To proceed then to the generall vse of Dairies, it consisteth first in the cattell (of which we haue spoken sufficiently) then in the howers of milking, the ordering of the milke, and the profits arising from the same.

The generall vse of Dairies.

The best and most commended howers for milking are indeed but two in the the day, that in the spring and summer time which is the best season for the dairie, is be-

The howers of milking.

*Manner of
milking.*

twixt five and sixe in the morning, and sixe and seauen a clock in the euening: and although nice and curious Hus-wiues will haue a third houre betwixt them, as betwene twelue and one in the after-noon, yet the better experient doe not allow it, and say as I beleue, that two good meales of milke are better ever then three bad ones, also in the milking of a Cow, the woman must sit on the neere side of the Cow, she must gently at first handle and stretch her dugges, and moisten them with milke that they may yeeld out the milke the berter and with lesse paine: shee shall not settle her selfe to milke, nor fixe her paille firme to the ground till she see the Cow stand sure and firme, but be ready vpon any motion of the Cow to saue her paille from ouerturning; when she seeth all things answerable to her desire, shee shall then milke the Cow boldly, and not leaue stretching and straining of her teats till not one drop of milke more will come from them, for the worst point of Hus-wifery that can bee, is to leaue a Cow halfe milkt; for besides the losse of the milke, it is the only way to make a Cow drie and vtterly vnprofitable for the Dairy: the Milke-mayd whilst she is in milking, shal do nothing rashly or suddenly about the Cow, which may affraight or amase her, but as she came gently, so with all getlenesse she shall depart.

*The ordering
of milk.*

*Ordering of
milk vessels.*

Touching the well ordering of milke after it is come home to the Dairy, the maine point belonging thereunto is the Hus-wiues cleanness in the sweet and neate keeping of the Dairy-house; where not the least moat of any filth may by any meanes appeare, but all things either to the eye or nose so void of sowerneesse or fluttishnesse, that a Princes bed-chamber must not exceed it: to this must be added the sweet and delicate keeping of her milke vessels, whether they be of wood, earth, or lead, the best of which

which is yet disputable with the best Hus-wives; only this opinion is generally receiued, that the wooden vessell which is round and shallow is best in cold vaults, the earthen vessels principall for long keeping, and the leaden vessell for yeelding of much creame: but howsoeuer, any and all these must be carefully scalded once a day, and set in the open aire to sweeten, lest getting any taint of sowerneesse into them, they corrupt the milk that shall be put therein.

But to proceed to my purpose, after your milk is come home, you shall as it were straine it from all vncleane things through a neate & sweet kept syle, the form whereof euery Hus-wife knowes, and the bottome of this file, through which the milke must passe, shall be couered with a very cleane washt fine linnen cloth, such an one as will not suffer the least mote or haire to goe through it: you shall into euery vessell file a pretty quantity of milke, according to the proportion of the vessell, the broader it is, the shallower it is, the better it is, and yeeldeth euer the best creame, and keepeth the milke longest from sowing.

*Silling of
milke.*

Now for the profits arising from milke, they are three of especiall account, as Butter, Cheese, and Milke, to be eaten either simple or compounded: as for Curds, sowe Milke, or VWhigge, they come from secondary meanes, and therefore may not be numbred with these.

*Profits arising from
milke.*

For your Butter which onely proceedeth from the Creame, which is the very heart and strength of Milke, it must be gathered very carefully, diligently, and painefully: And though cleauinesse be such an ornament to a Hus-wife, that if she want any part thereof, shee looseth both that and all good names else: yet in this action it must be more seriously imploied then in any other.

Of butter.

To beginne then with the fleeting or gathering of
your

*Of fleeting
Creame.*

*Of keeping
Creme.*

your Creme from the Milke, you shall doe it in this manner: the Milke which you did milke in the morning you shall with a fine thinne shallow dish made for the purpose, take of the Creme about five of the clocke in the evening, and the Milke which you did milke in the evening, you shall fleete and take of the Creme about five of the clocke the next morning; and the creme so taken off, you shall put into a cleane sweet and well leaded earthen pot close couered, & set in a coole place: And this creme so gathered you shall not keepe about two daies in the Summer, and not about foure in the Winter, if you will haue the sweetest and best butter; and that your Dairie containe five Kine or more; but how many or few soeuer you keep, you shall not by any meanes preserue your Creme about three daies in summer, and not about sixe in the Winter.

*Of chur-
ming But-
ter and the
daies.*

*Manner of
churning.*

Your Creme being neatly and sweet kept, you shall churme or churme it on those vsuall daies which are fittest either for your vse in the house, or the markets adioining neere vnto you, according to the purpose for which you keepe your Dayrie. Now the daies most accustomed held amongst ordinary Huswiues, are Tuesday and Friday: Tuesday in the afternoon, to serue Wednesday morning market, and Fryday morning to serue Saturday market; for Wednesday and Saturday are the most general market daies of this Kingdome, and Wednesday, Friday, and Saturday, the vsual fasting daies of the weeke; & so meetest for the vse of butter. Now for churning, take your creme and through a strong and cleane cloth straine it into the churme; and then couering the churme close, and setting it in a place fit for the action in which you are imploid (as in the summer in the coolest place of your dairy, and exceeding early in the morning, or very late in the evening

evening, and in the winter in the warmest place of your dairie, and in the most temperate howres, as about noone, or a little before or after, and so churne it, with swift strokes, marking the noise of the same which will be solid, heavy and intyre, vntill you heare it alter, and the sound is light, sharp, and more spiry, and then you shall say that your butter breakes, which perceiued both by this sound the lightnesse of the churne-staffe, and the sparkes and drops, which will appeare yellow about the lippe of the churne, and cleanse with your hand both the liddle and inward sides of the churne, and hauing put all together you shall colour the churne againe, and then with easie strokes round, and not to the bottome, gather the butter together into one intyre lumps and body, leauing no peeces thereof leuerall or vnioyned.

Now for as much as there bee many mischiefes and inconueniencies which may happen to butter in the churning, because it is a body of much tendernes, and neither will endure much heate, nor much cold: for if it bee ouer heated, it will looke white, crumble, and be bitter in taste, & if it be ouer cold it will not come at all, but make you wast much labour in vaine, which faults to help if you churne your butter in the heat of Sommer it shall not be amisse, if during the time of your churning you place your churn in a pail of cold water as deepe as your Creame riseth in the churne, and in the churning thereof let your strokes goe slow, and be sure that your churn be cold when you put in your cream: but if you churne in the coldest time of winter, you shall then put in your cream before the churne be cold after it hath been scalded; and you shall place it within the aire of the fire and churne it with as swift strokes, and as fast as may be, for the much labouring thereof will keepe it in a continu-

*Helps to
churning.*

The handling of butter

all warmth, and thus you shall haue your butter good, sweet, and according to your wish. After your butter is churned, or churned and gathered well together in your churne, you shall then open your churne, and with both your hands gather it well together, and take it from the buttermilke, and put it into a very cleane boule of wood, or pashion of earth sweetned for the purpose, and if you intend to spend the butter sweet and fresh, you shall haue your boule or pashion filled with very cleane water, and therein with your hand you shall worke the butter, turning, and tossing it to and fro till you haue by that labour beaten and washt out all the buttermilke, and brought the butter to a firme substance of it selfe, without any other moisture: which done, you shall take the butter from the water, and with the point of a knife scorch and slash the butter ouer and ouer euery way so thicke as is possible, leauing no part through which your knif must not passe; for this will cleanse and fetch out the smallest haire or mote, or ragge of a strainer, and any other thing which by casuall meanes may happen to fall into it.

Clening of butter.

Seasoning of Butter.

After this you shall spread the butter in a boule thin, and take so much salt as you shall think convenient, which must by no meanes be much for sweet butter, and sprinkle it thereupon, then with your hands worke the butter and the salt exceedingly well together, and then make it vp either into dishes, pounds, or halfe pounds at your pleasure.

Of May butter.

If during the month of May before you salt your butter you saue a lumpe thereof, and put it into a vessell, and so set it into the sunne the space of that moneth, you shall finde it exceeding soueraigne & medicinable for wounds, straines, aches, and such like grieuances.

Touching the poudring vp or potting of butter, you shall

shall by no meanes as in fresh butter wash the butter make out with water, but onely worke it cleere out with your hands: for water wil make the butter rusty, or ruelle; this done you shall weigh your butter, and know how many pounds there is thereof: for should you weigh it after it were salted, you would be deceiu'd in the weight: which done, you shall open the butter, and salt it very well and thoroughly, beating it in with your hand till it bee generally disperst through the whole butter; then take cleane earthen pots, exceedingly well leaded least the brine should leake through the same, and cast salt into the bottome of it: then lay in your butter, and presse it downe hard within the same, and when your pot is filled, then couer the top thereof with salt so as no butter be seene: then closing vp the pot let it stand where it may be cold and safe; but if your dairy be so little that you cannot at first fill vp the pot, you shall then when you haue ported vp so much as you haue, couer it all ouer with salt.

Now there be hus-wiues whose dairies being great, can by no meanes conveniently haue their butter contained in pots; as in *Holland, Suffolke, Norfolke*, and such like, and therefore are first to take barrells very close and wel made, and after they haue salted it well, they fill their barrells therewith; then they take a small stick, cleane and swete, and therewith make diuerse holes downe through the butter, euen to the bottome of the larrail; and then make a strong brine of water and salt which will beare an egge, and after it is boild, well skimm'd and cool'd; then poure it vpon the toppe of the butter till it swimme about the same, and so let it fettle. Some vse to boile in this brine a branch or two of *Rosemary*, and it is not amisse, but pleasant and whollome.

Now although you may at any time betwixt *May* and

Of powdering up or porting of Butter.

Of great dairies and their customes.

When to pot butter.

September put vp butter, obseruing to doe it in the coolest time of the morning: yet the most principall season of all is in the Month of *May* onlie; for then the aire is most temperate, and the butter will take salt the best, and the least subiect to reeling.

Use of Buttermilke.

Of Buttermilke Curds

Of Whigge.

Of Cheese.

The best vse of buttermilke for the able Hus-wiue is charitably to bestow it on the poore Neighbors, whose wants doe daily crie out for sustenance: and no doubt but she shall finde the profit thereof in a diuine place, as well as in her earthly businesse: But if her owne wants command her to vse it for her owne good, then shee shall of her buttermilke make curds in this manner: she shall take her buttermilke and put it into a cleane earthen vessell, which is much larger then to receiue the Butter-milke onely; and looking vnto the quantity thereof, shee shall take as it were a third part so much new Milke and let it on the fire, and when it is ready to rise, take it off and let it coole a little; then powre it into the buttermilke in the same manner as you would make a posset, and hauing stirred it about let it stand: then with a fine skimmer when you will vse the curds (for the longer it stands the better the curds will cate) take them vp into a cullander and let the whey drop well from it: and then cate them either with Creame, Ale, Wine, or Beere, as for the whey you may keepe it also in a sweet stone vessell: for it is that which is called VWhigge, and is an excellent coole drink and a wholsome; and may very well be drunke a summer through in sted of any other drinke, & without doubt will slake the thirst of any labouring man as well, if not better.

The next maine profit which ariseth from the Dairy is Cheese, of which there be diuers kinds, as new Milke, or morrow milke Cheese, nettle Cheese, floaten milk Cheese, and eddith, or after much Cheese, all which haue their

their seuerall orderings & compositions as you shall perceiue by the discourse following: yet before I doe begin to speake of the making of the Cheese, I will shew yow how to order your Cheeselep-bag or runnet, which is the most principall thing wherewith your Cheese is compounded, and giueth the perfect tast vnto the same.

The Cheeselepbagge or runnet which is she stomacke bagge of a young suckling calfe, which neuer tasted other food then milke, where the curd lieth vndigested. Of these bags you shall in the begining of the yeere provide your selfe good store, and first open the bagge and poure out into a cleane vessell the curd and thicke substance thereof; but the rest which is not curdled nou shall put away: then open the curd and picke out of it all manner of mores, chiers of grasse, or other filth gotten into the same: Then wash the curd in so many cold waters till it be as white and cleane from all sorts of mores as is possible; then lay it one a cleane cloth that the water may draine from it, which done, lay it in another dry vessell, then take a handfull or two of salt and rub the curd therewith exceedingly: then take your bag and wash it also in diuers cold waters till it be very cleane, and then put the curd and the salt vp into the bag, the bag being also well rub'd within with salt: and so put it vp, and salt the outside also all ouer: and then close vp the pot close and so keepe them a full yere before you vse them. For touching the hanging of them vp in chimney corners (as course Hus-wiues doe) is fluttish, naught, and vnholsome, and the spending of your runnet whilst it is new, makes your Cheese haue and prone hollow.

When your runnet or earning is fit to be vsed, you shall season it after this manner; you shall take the bagge you intend to vse, and opening it, put the curd into a stone

*Of the Chees-
lep bag or
runnet.*

*Seasoning of
the runnet.*

stone mortar or a bowle, and with a wooden pestell or a rolling pinne beat it exceedingly; then put to it the yelkes of two or three egges, and halfe a pint of the thickest and sweetest creame you can fleete from your milke, with a peny-worth of saffron finely dried and beaten to powder, together with a little Cloues and Mace, and stirre them all passing well together till they appeare but as one substance, and then put it vp in the bagge againe: then you shall make a very strong brine of water and salt, and in the same you shall boile a handfull or two of Saxifrage, and then when it is cold clare it into a cleane earthen vessell; then take out of the bagge halfe a dozen spoonfull of the former curd and mix it with the brine, then closing the bagge vp againe close hang it within the brine, and in any case also steepe in your brine a few Wall-nut-tree leaues & so keepe your runnet a fortnight after before you vse it; and in this manner dresse all your bagges so, as you may euer haue one ready after another, and the youngest a fortnight old euer at least, for that will make the caring quicke and sharp, so that foure spoonfulls thereof will suffice for the gathering and seasoning of at least twelue gallons of milke, and this is the choifest and best earning which can possible be made by any Hus-wife.

*To make a
new-milke
cheese com-
pound.*

To make a new milke or morning milk cheese, which is the best Cheese made ordinarily in our kingdome; you shall take your milk early in the morning as it comes from the Cow, and file it into a cleane tubbe, then take all the creame also from the milke you milk the eueing before, and straine it into your new milke; then take a pretty quantity of cleane water, and hauing made it scalding hot, powre it into the milke also to scauld the creame and it together, then let it stand, and coole it with a dish rill it be no more then luke warme; then go to the pot where your earning

earning bagges hangs, and draw from thence so much of the earning without stirring of the bagge, as will serue for your proportion of milke, and straine it therein very carefully; for if the least mote of the curd of the earning fall into the cheefe, it will make the Cheefe rot and mould; when your earnings is put in you shall couer the mike, and so let it stand halfe an howre or thereabouts; for if the earning be good it will come in that space; but if you see it doth not, then you shall put in more: being come, you shall with a dish in your hand breake and mash the curd together, possing and turning it about diuersly: which done, with the flat palms of your hands very gently presse the curd downe into the bottome of the tub, then with a thinne dish take the whey from it as cleane as you can, and so hauing prepared your Cheefe-fat answerable to the proportion of your curd, with both your hands ioined together, put your curd therein and breake it and presse it downe hard into the fat till you haue filld it; then lay vpon the top of the curd your flat cheese-boord, and a little small weight thereupon, that the whey may drop from it into the vnder vessell; when it hath done dropping take a large cheese-cloth, and hauing wet it in the cold water lay it on the cheese-boord, and then turne the cheese vpon it; then lay the cloth into the cheesefat; and so put the cheefe therein againe, and with a thin slice thrust the same down close on euery side; then laying the cloth also ouer the top to lay on the cheese-boord, and so carry it to your great presse, and there presse it vnder a sufficient waight; after it hath been there prest halfe an howre, you shall take it and turne it into a drie cloth, and put it into the presse againe, and thus you shall turne it into drie cloathes at least fve or sixe times in the first day, and euer put it vnder the presse againe, not taking it threfrom till the next day in
the

the evening at soonest, and the last time, it is turned you shall turne it into the dry fat without any cloth at all.

When it is prest sufficiently and taken from the fat, you shall then lay it in a kinnell, and rub it first on the one side and then on the other with salt, and so let it lie all that night, then the next morning, you shall doe the like again and so turne it vpon the brine, which comes from the salt two or three dayes or more, according to the bignesse of the cheefe, and then lay it vpon a faire table or shelve to drie, forgetting not euery day once to rubbe it all ouer with a cleane cloth, and then to turne it till such time that it be thoroughly drie and fit to goe into the presse; and in this manner of drying you must obserue to lay it first where it may drie hastily, and after where it may drie at more leasure; thus may you make the best and most principall cheefe.

*Cheefe of
two meales.*

Now if you will make Cheefe of two meales, as your mornings new milke, and the eueninges Creame milke, and all you shall doe but the same formerly rehearsed. And if you will make a simple morrow milke Cheefe which is all of new milke and nothing els; you shall then doe as is before declared, onely you shall put in your earning so soone as the milke is fild (if it haue any warmth in it) and not scald it; but if the warmth be lost you shall put it into a kettell and giue it the aire of the fire.

*Cheefe of
one meale.*

If you will haue a very dainty nettle Cheefe, which is the finest summer Cheefe which can be eaten; you shall doe in all things as was formerly taught in the new milke Cheefe compound; Onely you shall put the curd into a very thin cheefe-fat, not aboue halfe an inch or a little better deepe at the most, and then when you come to dry them as soone as it is drained from the brine, you shall lay it vpon fresh nettles and couer it all ouer with the same;

*Of nettles
Cheefe.*

and

and so lying where they may feele the aire, let them ripen therein, obseruing to renew your nettles once in two dayes, and euery time you renew them, to turne the Cheefe or Cheeses, and to gather your Nettles as much without stalkes as may be, and to make the bed both vnder and aloft as smooth as may be, for the more euen and fewer wrinkles that your Cheefe hath, the more daintie is your Houf-wife accounted.

If you will make floaten Milke Cheefe, which is the coursest of all Cheeses, you shall take some of the Milke and heate it vpon the fire to warme all the rest : but if it be so sower that you dare not aduenture the warming of it for feare of breaking, then you shall heate water, and with it warme it ; then put in your earning as before shewed, and gather it, presse it, salt it, and drie it as you did all other Cheeses.

*Of floaten
milk-cheefe.*

Touching your eddish Cheefe or winter Cheefe, there is not any difference betwixt it and your summer Cheefe touching the making thereof onely, because the season of the yeere denieth a kindly drying or hardning thereof, it differeth much in taste, and will bee soft alwaies; and of these eddish Cheeses you may make as many kinds as of summer cheeses, as of one meale, two meales, or of Milke that is floaten.

*Of eddish
cheefe.*

When you haue made your Cheefe, you shall then haue care of the Whey, whose generall vse differeth not from that of butter-milke, for either you shall preserue it to bestow on the poore, because it is a good drink for the labouring man, or keepe it to make curds out of it, or lastly to nourish and bring vp your swine.

*Of whey
and the pra-
fits.*

If you will make curds of your best Whey, you shall set it vpon the fire, and being ready to boile, you shall put into it a pretty quantitie of butter-milke, and then as you

*Of whey
curds.*

ſee the Curds ariſing vp to the top of the Whey, with a ſkummer ſkim them off, and put them into a Cullender, and then put in more butter-milke, and thus doe whileſt you can ſee any Curds ariſe; then the Whey being drained cleane from them, put them into a cleane veſſell, and ſo ſerue them forth as occaſion ſhall ſerue.

CHAP. V.

The Office of the Malſter, and the ſeueral ſecrets, and knowledges belonging to the making of Malt.

Thiſ moſt requiſite and fit that our Houſ-wiſe be experienced and well practiſed in the well making of Malt, both for the neceſſarie and continuall vie thereof, as alſo for the generall profit which accrueth and ariſeth to the husband, houſwife, and the whole familie: for as from it is made the drinke, by which the houſhold is nourished and ſuſtained, ſo to the fruitfull husbandman (who is the maſter of rich ground, and much tillage) it is an excellent merchandize, and a commodity of ſo great trade, that not alone eſpeciall Townes and Counties are maintained thereby, but alſo the whole Kingdome, and diuers others of our neighboring Nations. This office or place of knowledge belongeth particularly to the Houſ-wife, and though we haue many excellent Men malſters, yet it is properlie the worke and care of the woman, for it is a houſe-worke, and done altogether within dores, where generally lieth her charge; the Man only ought to bring in, and prouide the graine, and excuſe her from portage or too heauie burthens; but for the Art of making the Malt,

Malt, and the feuerall labours appertaining to the same, euen from the Fat to the Kilne, it is onely the worke of the Houfwife and the Maid-seruants to her appertaining.

To begin then with the first knowledge of our Malster, it consisteth in the election and choise of graine fit to make Malt on, of which there are indeed truly but two kinds, that is to say, Barley, which is of all other the most excellent for this purpose; and Oates, which when Barly is scant or wanting, maketh also a good and sufficient Malt: and though the drinke which is drawne from it be neither so much in the quantitie, so strong in the substance, nor yet so pleasant in the taste, yet is the drink verie good and tolerable, and nourishing enough for any reasonable creature. Now I do not denie, but there may be made Malt of Wheate, Pease, Lupins, Fetches and such like, yet it is with vs of no retained custome, nor is the drink simply drawne or extracted from those graines, either wholsome or pleasant, but strong and fulsome; therefore I thinke it not fit to spend any time in treating of the same. To speake then of the election of Barly, you shall vnderstand that there be diuers kinds thereof, according to the alteration of soyles, some being big, some little, some full, some emptie, some white, some browne, and some yellow: but I will reduce all these into three kinds, that is, into the Clay-Barly, the Sand-Barly, and the Barly which groweth on the mixt soyle. Now the best Barly to make Malt on, both for yeelding the greatest quantitie of matter, and making the strongest, best and most wholsome drink, is the Clay barly wel drest, being cleane

*Election of
Corne for
Malt.*

Corne of it selfe, without Weede or Oates, white of colour, full in substance, and sweete in taste: that which groweth on the mixt grounds is the next; for though it

be ſubieſt to ſome Oates and ſome Weedes ; yet being painefully and carefully dreſt, it is a faire and a bould corne, great and full ; and though ſomewhat browner then the former, yet it is of a faire and cleane complexion. The laſt and worſt graine for this purpoſe is the ſand Barly, for although it bee ſeldome or neuer mixt with Oates, yet if the tillage bee not painefully and cunningly handled, it is much ſubieſt to Weedes of diuers kinds, Tares, Fetches, and ſuch like, which drinke vp the liquor in the brewing, and make the yeeld or quantitie thereof very little and vnprofitable : beſides, the graine naturally of it ſelfe hath a yellow, withered, emptie huske, thicke and vnfurniſhed of meale, ſo that the drinke drawne from it can neither be ſo much, ſo ſtrong, ſo good, nor ſo pleaſant ; ſo that to conclude, the cleane Clay-barley is beſt for profit in the ſale-drinke for ſtrength and long laſting. The Barly on the mixt grounds will ſerue well for houſholds and Families : and the Sand-barly for the poore, and in ſuch places where better is not to be gotten. And theſe are to bee knowne of euery Husband or Huſwife ; the firſt by his whitenefſe, greatneſſe and fulneſſe : the ſecond by his browneneſſe, and the third by his yellowneſſe, with a darke browne nether end, and the emptines and thickeſſe of the huske (and in this election of Barley you ſhall note, that if you find in it any wild Oats, it is a ſigne of a rich clay-ground, but ill husbanded, yet the Malt made thereof is not much amiſſe, for both the wilde Oate and the perfit Oate giue a pleaſant ſharpe relliſh to the drinke, if the quantitie bee not too much, which is euermore to be reſpected. And to conclude this matter of election, great care muſt be had of both Husband and Huſwife, that the Barley choſen for Malt, bee exceeding ſweete, both in ſnell and taſte, and verie cleane dreſt for

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any corruption maketh the Malt loathsome, and the foule dressing affoordeth much losse.

After the skilfull election of graine for Malt, the Hus- *Of the Malt*
wife is to looke to the situation, goodnesse and apt ac- *house, and the*
commodation of the Malt-house; for in that consisteth *situation.*
both much of the skill, and much of the profit: for the
generall situation of the house, it would (as neere as can
bee) stand vpon firme drie ground, hauing prospect eue-
ry way, with open windowes and lights to let in the
Wind, Sunne and Ayre, which way the Malster plea-
seth, both to coole and comfort the graine at pleasure,
and also close-shuts or draw-windowes to keepe out the
Frosts and Stormes, which are the onely lets and hinde-
rances for making the Malt good and perfit, for the mo-
dell or forme of these houses, some are made round, with
a Court in the middle, some long, and some square, but
the round is the best and the least laborious; for the Ce-
sternes or Fats being placed (as it were) at the head, or
beginning of the cirkle, and the Pumpe or Well (but the
Pumpe is best) beeing close adioyning, or at least by con-
ueyance of troughes made as vsfull as if it were neere
adioyning, the Corne beeing steapte, may with one
persons labour and a shouell, bee cast from the Fatt, or
Cesterne to the flowre and there coucht; then when the
couch is broken it may in the turning either with the
hand or the shouell, bee darried in such a circular house
round about from one flowre to another, till it come to
the kilne, which would also bee placed next ouer against
the Pumpe and Cesternes, and all contained vnder one
rooffe; and thus you may empirie steeping after steeping,
and carrie them with one persons labour from flowre to
flowre, till all the flowres be fild: in which circular mo-
tion you shall find, that euer that which was first steapt,

shall first come to the Kilne, and so consequently one after another in such sort as they were steeped, and your worke may euermore be constant, and your flowres at no time emptie but at your owne pleasure, and all the labour done onely with the hand and shouell, without carrying or recarrying, or lifting heauie burthens, which is both troublesome and offensive, and not without much losse, because in such cases euer some graine scattereth. Now ouer against the Kiln-hole or furnace (which is euermore intended to be on the ground) should a conuenient place be made to pile in the fuell for the Kilne, whether it bee Straw, Bracken, Furres, Wood, Coale, or other fewell; but sweet Straw is of all other the best and neatest. Now it is intended that this Malt-house may be made two stories in height, but no higher: ouer your Cesternes shall be made the Garners wherein to keepe your Barley before it be steeped: in the bottoms of these Garners, standing directly ouer the Cesternes, shall bee conuenient holes made to open and shut at pleasuer, through which shall run downe the Barley into the Cesterne. Over the bed of the Kilne can be nothing but the place for the Haire-cloth, and a spacious roofo open euery way, that the smoke may haue free passage, and with the least ayre bee carried from the Kilne, which maketh the Malt sweete and pleasant. Over that place where the fewell is piled, & is next of all to the bed of the Kilne, would likewise bee other spacious Garners made, some to receiue the Malt as soone as it is dried with the Come and Kilne-dust, in which it may lie to mellow and ripen; and others to receiue the Malt after it is skreened and drest vp; for to let it be too long in the Come, as aboue three moneths at longest, will make it both corrupt, and breed Weeuels and other Wormes, which are the greatest destroyers of Malt

Malt that may be. And these Garners, should be so conueniently plac't before the front of the Kilne-bed, that either with the shouell or a small scuttle you may cast, or carrie the Malt once dried into the Garners. For the other part of the flowres, they may bee employed as the ground-flowres are for the flourishing of the Malt when it comes from the Cesterne: and in this manner, and with these accommodations you may fashion any Malt-house either round, long, square, or of what proportion soeuer, as either your estate, or the conuenience of the ground you haue to build on shall administer.

Next to the site or proportion of the ground, you shall haue a principall care for the making of your Malt-flowres, in which (all be Customs, and the Nature of the soyle binds many times a man to sundrie inconueniences, and that a man must necessarily build according to the matter he hath to build withall, from whence ariseth the many diversities of Malt-flowres, yet) you shall vnderstand, that the generall best Malt-flowre, both for Summer and Winter, and all seasons, is the caue or vaulted arch which is hewed out of a drie and maine greetie rock, for it is both warme in Winter, coole in Summer, and generally comfortable in all seasons of the yeere whatsoeuer. For it is to be noted, that all bee houswiues doe giue ouer the making of Malt in the extreame heate of Summer, it is not because the Malt is worse that is made in Summer then that which is made in Winter, but because the flowres are more vnseasonable, and that the Sunne getting a power into such open places, maketh the graine which is steeped to sprout and come so swiftly, that it cannot indure to take time on the flowre, and get the right seasoning which belongeth to the same: whereas these kind of vaults being drie, and as it were coucht vnder

Of Malt-flowres.

vnder the ground, not onely keepeth out the sunne in summer, which maketh the Malt come much too fast, but also defendeth it from frosts and cold bitter blasts in sharpe winters, which will not suffer it to come, or sprout at all; or if parte doe come and sprout, as that which lieth in the hart of the bed; yet the vpper parts and outside by meanes of extreame cold cannot sprute; but being againe dried, hath his first hardnes, and is one and the same with raw Barley; for every Hus-wife must know, that if Malt doe not come as it were altogether, and at an instant, and not one come more then another, the Malt must needs bee very much imperfite: The next flower to the Caue, or drie sandy rocke, is the Flower which is made of earth, or a stiffe strong binding Clay well watred, and mixt with horse dung, and soape-ashes, beaten and wrought together, till it come to one solled firmnes; this Flower is a very warme comfortable Flower in the winter season, and will helpe the grayne to come and sprout exceedingly, and with the helpe of windowes to let in the cold aire, and to shut out the violent reflection of the sunne, will serue very conueniently for the making of Malt, for nine monthes in the yeere, that is to say, from September till the end of May; but for Iune, Iuly, and August, to imploy it to that purpose, will breed both losse, and incumbrance: The next flower to this of earth, is that which is made of plaster, or plaster of paris, being burnt in a seasonable time, and kept from wet, till the time of shooting, and then smoothly laid, and well leuelled; the imperfection of this plaster Flower is onely the extreame coldnesse thereof, which in frosty and colde seasons, so bindeth in the heart of the graine, that it cannot sprout, for which cause it behooueth euery Maltster that is compelled to these Flowers,

to looke well into the seasons of the yeere, and when hee findeth either the Frosts, Northerne blasts, or other nipping stormes to rage too violently, then to make his first couches or beds, when the graine commeth newly out of the Cesterne, much thicker and rounder then otherwise he would doe; and as the cold abateth, or the corne increaseth in sprouting, so to make the couches or beds thinner and thinner; for the thicker and closer the graine is coucht and laid together, the warmer it lieth, and so catching heate, sooner sprouteth, and the thinner it lieth the cooler it is, and so much the slower in sprouting. This slowre, if the windowes be close, and guard of the Sunne sufficiently, will (if necessitie compel) serue for the making of Malt ten moneths in the yeere, onely in Iuly and August which containe the Dog-dayes, it would not be employed, nor in the time of any violent Frost, without great care and circumspection. Againe, there is in this slowre another fault, which is a naturall casting out of dust, which much sullieth the graine, and being dried makes it looke dun and foule, which is much disparagement to the Malster; therefore she must haue great care that when the Malt is taken away, to sweepe and keepe her flowres as cleane and neate as may be. The last and worst is the boarded flowre, of what kind soeuer it be, by reason of the too much heate thereof, and yet of boarded flowres the Oaken boarded is the coolest and longest lasting; the Elme or Beech is next; then the Ashe, and the worst (though it be the fairest to the eye) is the Firre, for it hath in it selfe (by reason of the Frankensence and Terpentinite which it holdeth) a naturall heate, which mixed with the violence of the Sunne in the Summer-time, forceth the graine not onely to sprout, but to grow in the couch, which is much losse, and a foule imputation. Now

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Flowres.*

these boarded flowres can hardly be in vse for aboute five moneths at the most, that is to say, October, Nouember, December, Ianuarie and Februarie; for the rest, the Sun hath too much strength, and these boarded flowres too much warmth; and therefore in the coolest times it is good to obserue to make the couches thin, whereby the aire may passe thorow the corne, and so coole it, that it may sprout at leasure. Now for any other flowre besides these already named, there is not any good to malt vpon; for the common flowre which is of naturall earth, whether it be Clay, Sand or Grauell, if it haue no mixture at all with it more then it owne nature, by oft treading vpon it, groweth to gather the nature of saltneffe or Saltpeter into it, which not onely giueth an ill taste to the graine that is laid vpon the same, but also his moysture and moldines, which in the moyst times of the yere arise from the ground, it often corrupteth and putrifieth the corne. The rough paped flowre by reason of the vneuenes, is vnfit to malt on, because the graine getting into the crannies doth there lie, and are not remoued or turned vp and downe as they should be with the hand, but many times is so fixed to the ground, it sprouteth and groweth vp into a greene blade, affording much losse and hindrance to the owner. The smooth paped flowre, or any flowre of stone whatsoever, is full as ill; for euery one of them naturally against much wet or change of weather, will sweate and distill forth such abundant moisture, that the Malt lying vpon the same, can neither dry kindly and expell the former moisture receiued in the cesterne, but also by that overmuch moysture many times rotteth, and comes to be altogether vseles. Lastly, for the flowre made of Lime and Haire, it is as ill as any formerly spoken of, both in respect of the nature of the Lime, whose heate and sharpnes is a
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maine enemy to Malt, or any moist come, as also in respect of the weaknes and brittlenes of the substance thereof, being apt to molder and fall in peeces with the lightest treading on the same, and that lime and dust once mixing with the corne, it doth so poison and suffocate it, that it can neither sprout, nor turne seruiceable for any vse.

Next vnto the Malt-flowres, our Malster shall haue a great care in the framing and fashioning of the Kilne, of which there are sundrie sorts of moddles, as the ancient forme which was in times past vsed of our fore-fathers, being only made in a square proportion at the top with small splints or rafters, ioyned within fower inches one of another, going from a maine beame crossing the mid part of that great square: then is this great square from the top, with good and sufficient studds to be drawne slopewise narrower and narrower, till it come to the ground, so that the harth or lowest part thereof may bee not aboue a sixth part to the great square aboue, on which the Malt is laid to be dried, and this harth shall bee made hollow and descending, and not leuell nor assending: and these Kilnes do not hold any certaine quantitie in the vpper square, but may euer bee according to the frame of some being thirty foot each way, some twenty, and some eightene. There be other Kilnes which are made after this maner open and slope, but they are round of proportion; but both these kind of Kilnes haue one fault, which is danger of fire, for lying euery way open and apt for the blaze, if the Malster be any thing negligent either in the keeping of the blaze low and forward, or not sweeping euery part about the harth any thing that may take fire, or foreseeing that no straws which do belong to the bedding of the kilne do hang downe, or are loose, wherby the fire may take hold of them, it is very possible that the Kilne

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and the buil-
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may be set on fire, to the great losse and often vndoing of the owner.

Which to preuent, and that the Maltster may haue better assurance and comfort in her labour, there is a Kilne now of generall vse in this Kingdome, which is called a French Kilne, being framed of Bricke, Ashler, or other fire-stone, according to the nature of the soyle in which Husbands and Huswiues liue: and this French Kilne is euersafe and secure from fire, and whether the Maltster wake or sleepe, without extreame wilfull negligence, there can no danger come to the Kilne; and in these Kilnes may be burnt any kind of fewell whatsoeuer, and neither shall the smoke offend or breed ill taste in the Malt, nor yet discolour it, as many times it doth in open Kilnes, where the Malt is as it were, couered all ouer, and euen parboyld in smoke: so that of all sorts of Kilnes whatsoeuer, this which is called the French Kilne, is to bee preferred and onely embraced. Of the forme or modell whereof, I will not here stand to intreate, because they are now so generally frequent amongst vs, that not a Mason or Carpenter in the Kingdome but can build the same, so that to vse more words thereof were tediousnesse to little purpose. Now there is another kind of Kilne which I haue seene (and but in the West-countrie onely) which for the profitable quaintnesse thereof, I tooke some especiall note of, and that was a Kilne made at the end of a Kitchen Raunge or Chimney, being in shape round, and made of Brick, with a little hollownesse narrowed by degrees, into which came from the bottom and midst of the Kitchen-chimney a hollow tunnell or vault, like the tunnell of a Chimney, and ran directly on the back-side, the hood or backe of the Kitchen-chimney; then in the midst of the Chimney, where the greatest strength

strength of the fire as made, was a square hole made of
 about a foot and a half every way, with an Iron thicke
 plate to draw to and fro, opening and closing the hole at
 pleasure; and this hole doth open onely into that tunnell
 which went to the Kilne, so that the Malt being once
 laid, & spread vpon the Kilne, draw away the Iron plate,
 and the ordinarie fire with which you dresse your meate,
 and performe other necessarie busineses, is suckt vp into
 this tunnell, and so commeth the heate to the Kilne,
 where it drieth the Malt with as great perfection, as any
 Kilne that ever I saw in my life, and needeth neither at-
 tendance or other ceremony more, then once in five or
 sixe houres to turne the Malt, and take it away when it is
 dried sufficiently. For it is here to bee noted, that how
 great or violent soever the fire be which is in the Chim-
 ney, yet by reason of the passage, and the quantitie there-
 of it carrieth no more but a moderate heate to the Kilne;
 and for the smoke, it is so carried away in other loop-
 holes which run from the hollownesse betweene the tun-
 nell and the Malt-bed, that no Malt in the world can pos-
 sibly be sweeter or more delicately coloured: onely the
 fault of these Kilnes are, that they are but little in com-
 passe, and so cannot drie much at a time, as not about a
 quarter of ten strike at the most in one drying, and there-
 fore are no more but for a mans owne particular vse, and
 for the furnishing of one settled familie; but so applied,
 they exceede all the Kilnes that I haue seene whatso-
 ever.

When our Malster hath thus persited the Malt-house
 and Kilne, then next tooke to the well bedding of the
 Kilne, which is diligently done according to mens driuers
 opinions, for some vse one thing, and some another, as
 the necessitie of the place, or mens particular profits

*Bedding of
the Kilne.*

draw them. But first to shew you what the bedding of a Kilne is, you shall vnderstand, that it is a thin covering laid vpon the open rafters, which are next vnto the heate of the fier, being made either so thin or so open, that the smallest heate may passe thorow it, and come to the corne: this bed must be laid so euē and leuell as may be, and not thicker in one place then another, lest the Malt drie too fast where it is thinnest, and too slowly where it is thicke, and so in the taste seeme to bee of two seuerall dryings: it must also be made of such stuffe, as hauing receiued heate, it will long continue the same, and be an assistant to the fire in drying the corne: it should also haue in it no moyst or dankish propertie, least at the first receiuing of the fire, it send out a stinking smoke, and so raine the Malt: nor should it bee of any rough or sharpe substance, because vpon this bed or bedding is laid the haire-cloth, and on the haire-cloth the Malt, so that with the turning the Malt, and treading vpon the cloth, should the bed be of any such roughnesse, it would soone weare out the haire-cloth, which would be both losse and ill housewifery, which is carefully to be eschewed. But now for the matter or substance whereof this bedding should bee made, the best, neatest, and sweetest, is cleane long Rie straw, with the eares onely cut off, and the ends laid euē together, not one longer then another, and so spread vpon the rafter of the Kilne as euē and thin as may be, and laid as it were straw by straw in a iust proportion, where skill and industrie may make it thin or thicke at pleasure, as but the thicknesse of one straw, or of two, three, foure or fīue, as shall seeme to your iudgement most conuenient, and then this, there can be nothing more euē, more drie, sweete, or open to let in the heate at your pleasure: and although in the old open Kilnes it be sub-
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iect to danger of fire, by reason of the quicknesse to receiue the flame, yet in the French Kilnes (before mentioned) it is a most safe bedding for not any fire can come neere vnto it. There bee others which bed the Kilne with Mat; and it is not much to bee misliked, if the Mat bee made of Rye-straw sowed, and wouen together according to the manner of the Indian Mats, or those ysuall thin Bent-Mats, which you shall commonlie see in the Summer time, standing in Husbandmens Chimnies, where one bent or straw is laid by another, and so wouen together with a good strong pack-thread: but these Mats according to the old Prouerbe (More cost more Worship,) for they are chargeable to bee bought, and verie troublesome in the making, and in the wearing will not out-last one of the former loose beddings; for if one thread or stich breake, immediatelic most in that row will follow: onely it is most certaine; that during the time it lasteth it is both good, necessarie and handsome. But if the Mat bee made either of Bulrushes, Flaggs, or any other thicke substance (as for the most part they are) then it is not so good a bedding, both because the thickeesse keepeth out the heate, and is long before it can bee warmed; as also in that it euer being cooled, naturally of it selfe draweth into it a certaine moysture, which with the first heate beeing expelled in smoke, doth much offend and breed ill taste in the Malt. There bee others that bed the Kilne with a kind of Mat made of broad thinne splints of wood wrought checker-wise one into another, and it hath the same faults which the thicke Mat hath; for it is long in catching the heate, and will euer smoke at the first warming, and that smoke will the Malt smell on
euer

euier after; for the smoke of wood is euier more sharpe and piercing then any other smoke whatsoeuer. Besides this wooden mat, after it hath once bedded the Kilne, it can hardly afterward bee taken vp or remoued; for by continuall heate, being brought to such an extreme drie-nesse, if vpon any occasion either to mend the Kilne, or cleanse the Kilne, or doe other necessarie labour ynderneath the bedding, you should take vp the wooden mat, it would presently crack and fall to peeces, and bee no more seruiceable. There be others which bed the Kilne with a bedding made all of wickers, or small wands folded one into another like a hurdle, or such like wandworke; but it is made very open, euery wand at least two or three fingers one from another: and this kind of bedding is a very strong kind of bedding, and will last long, & catcheth the heat at the first springing, only the smoke is offensive, and the roughnesse without great care vsed, will soone weare out your haire-cloth: yet in such places where straw is not to bee got or spared, and that you are compelled onely to vse wood for your fuell in drying your Malt, I allow this bedding before any other, for it is very good, strong and long-lasting: besides, it may be taken vp and set by at pleasure, so that you may sweepe and cleanse your Kilne as oft as occasion shall serue, and in the neate and fine keeping of the Kilne, doth consist much of the huswiues Art; for to be choakt either with dust, durt, soote or ashes, as it shewes sluttishnesse and sloth, the onely great imputations hanging ouer a huswife, so they likewise hinder the labour, and make the Malt drie a great deale worse, and more vnkindly.

*Of fuell for
the drying of
Malt.*

Next the bedding of the Kilne, our Malster by all meanes must haue an especiall care with what fuell shee drieth the Malt; for commonly according to that it euier receiueth

receiveth and keepeth the taste, if by some especiall Art in the Kilne that annoyance be not raken away. To speake then of Fewels in generall, they are of diuers kinds according to the natures of foyles, and the accommodation of places in which men liue; yet the best and most principall fewell for the Kilnes (both for sweetnesse, gentle heate, and perfit drying) either good Wheate-straw, Rie-straw, Barley-straw, or Oaten-straw; and of these the Wheate-straw is the best, because it is most substantiall, longest lasting, makes the sharpest fire, and yeelds the least flame: the next is Rie-straw, then Oaten-straw, and last Barley-straw, which by reason it is shortest, lightest, least lasting, and giueth more blaze then heate, it is last of these white strawes to be chosen; and where any of these faile, or are scarce, you may take the stubble or after-crop of them, when the vpper part is shorne away; which being well dried and housed, is as good as any of the rest already spoken of, and lesse chargeable, because it is not fit for any better purpose as to make fodder, meazure, or such like, of more then ordinary thatching, & so fittest for this purpose. Next to these white strawes, your long Fennel, rushes being very exceedingly well withered and dried, and all the sappie moisture gotten out of them, and so either safely housed or stacked, are the best fuell: for they make a very substantiall fire, and much lasting, neither are apt to much blazing, nor the smoake so sharpe or violent but may very well be indured; where all these are wanting, you may take the straw of Pease, Fetches, Lupins, or Tares, any of which will serue; yet the smoke is apt to taint, and the fire without preuention drieth too suddenly and swiftly. Next to cleane Beane-straw, or straw mixt of Beanes and Pease together; but this must be handled with great discretion, for the substance containeth so

much heate, that it will rather burne then drie, if it be not moderated, and the smoke is also much offensive. Next to this Beane-straw is your Furres, Gorse, Whinnes, or small Brush-wood, which differeth not much from Beane-straw, onely the smoke is much sharper, and tainteth the Malt with a much stronger fauour. To these I may adde Braken or Braks, Ling, Heath, or Brome, all which may serue in time of necessitie, but each one of them haue this fault, that they adde to the Malt an ill taste or fauour. After these I place Wood of all sorts, for each is alike noysome, and if the smoke which commeth from it touch the Malt, the infection cannot bee recovered; from whence amongst the best husbands haue sprung this opinion, that when at any time drinke is ill tasted, they say straight, it was made of Wood-dried Malt. And thus you see the generalitie of fuels, their vertues, faults, and how they are to be employed. Now for Coale of all kinds, Turfe or Peate, they are not by any meanes to be vsed vnder Kilnes, except where the furnaces are so subtiltie made, that the smoke is conuayed a quite contrarie way, and neuer commeth neere the Malt; in that case it skilleth not what fuell you vse, so it bee durable and cheape, it is fit for the purpose, onely great regard must be had to the gentleness of the fier; for as the old Prouerb is (Soft fier makes sweete Malt) so too rash and hasty a fire scorseth and burneth it, which is called amongst Maltsters Firefangd; and such Malt is good for little or no purpose: therefore to keepe a temperate and true fire, is the onelie Arte of a most skilfull Maltster.

*The making
of the Gar-
ners.*

When the Kilne is thus made and furnished of all necessaries duely belonging to the same, our Maltsters next care shall bee to the fashioning and making of the

the Garners, Hutches, or Holds in which both the Malt after it is dried, and the Barley before it be steeped, is to be kept and preserved; and these Garners or Safes for Corne are made of diuers fashions, and diuers matters, as some of Boards, some of Bricks, some of Stone, some of Lime and Haire, and some of Mud, Clay or Loame: but all of these haue their seuerall faults; for Wood of all kinds breedeth Weeuell and Wormes which destroy the Graine, and is indeed much too hot: for although Malt would euer bee kept passing drie, yet neuer so little ouer-plus of heate withers it, and takes away the vertue; for as moysture rots and corrupts it, so heate takes away and decayeth the substance. Bricke, because it is laid with Lime, is altogether vnholosome, for the Lime being apt at change of weather to sweat, moystneth the graine, and so rainteth it, and in the driest seasons with the sharpe hot taste, doth fully as much offend it: those which are made of Stone are much more noysome, both in respect of the reasons before rehearsed, as also in that all Stone of it selfe will sweate, and so more and more corrupteth the Graine which is harboured in it. Lime and Haire being of the same nature, carrieth the same offences, and is in the like sort to be eschewed. Now for Mud, Clay, or Loame, in as much as they must necessarily be mixed with wood, because otherwise of themselues they cannot knit or bind together, and besides, that the clay or loame must bee mixt either with chopt-hay, chopt-straw, or chopt-litter, they are as great breeders of wormes & vermin as wood is, nor are they defences against Mice, but easie to be wrought through, and so very vnprofitable for any husband or hufwife to vse. Besides, they are much too hot, and being either in a close house neere the kilne,

or the back or face of any other Chimney, they drie the Corne too fore, and make it dwindle and wither, so that it neither filleth the bushell, nor intriceth the liquor, but turnes to losse every way. The best Garner then that can be made both for safetie and profit, is to be made either of broken tile-thread, or broken bricks, cunningly and euen laid, and bound together with Plaster of Paris, or our ordinarie English Plaster, or burnt Alabaſter, and then couered all ouer both within and without, in the bottome and on euery side, at least three fingers thicke with the same Plaster, so as no bricke or tile-thread may by any meanes bee seene, or come neere to touch the Corne; and these Garners you may make as bigge, or as little as you please, according to the frame of your house, or places of most conuenience for the purpose, which indeed would euer bee as neere the Kilne as may be, that the ayre of the fire in the dayes of drying may come vnto the same, or else neere the backs or sides of Chimneys, where the ayre thereof may correct the extreame coldnesse of the plaster which of all things that are bred in the earth, is the coldest thing that may be, and yet most drie, and not apt to sweate, or take moysture but by some violent extremity, neither wil any worme or vermine come neere it, because the great coldnesse thereof is a mortall enemy to their natures, and so the safest and longest these Garners of Plaster keepe all kind of Graine and Pulse in the best perfection.

*The making
of cesternes.*

After these Garners, Hutches, or large Keeperes for Corne are perfitted and made, and fitly adioyned to the Kilne, the next thing that our Maulster hath too looke vnto, is the framing of the Fats or Cesternes, in which the Corne is to bee steeped, and they are of two sorts, that is, either of Coopers worke; being great Fats of wood,

or else of Masons worke, being Cesternes made of stone; but the Cesterne of stone is much the better, for besides that these great Pans of wood are very chargeable and costly (as a Fat to containe foure quarters of graine, which is but two and thirtie bushels, cannot bee afforded vnder twenty shillings), so likewise they are very casuall and apt to mischance and spilling; for besides their ordinarie wearing, if in the heate of Summer they be neuer so little neglected without water, and suffered to ouer-drie, it is ten to one but in the Winter they will bee ready to fall in peeces; and if they be kept moyst, yet if the water be not oft shifted and preserved sweet, the Fat will soone taint, and being once growne faultie, it is not onely irrecoverable, but also whatsoeuer commeth to be steeped in it after, will be sure to haue the same sauour, besides the wearing and breaking of Garthes and Pluggs, the binding, cleansing, sweetning, and a whole world of other troubles and charges doe so daily attend them, that the benefit is a great deale short of the incumbrance; whereas the Cesterne is euer ready and vsfull, without any vexation at all, and being once wel and sufficiently made, will not neede trouble or reparation (more then ordinary washing) scarce in an hundred yeeres. Now the best way of making these Mault-cesterns, is to make the bottomes and sides of good tile-threads, fixed together with the best Lime and Sand, and the bottome shall bee raised at least a foote and a halfe higher then the ground, and at one corner in the bottome a fine artificiall round hole must be made, which being outwardly stopp, the Maultster may through it draine the Cesterne drie when they please, and the bottome must bee so artificially leuelled and contriued, that the water may haue a true descent to that hole, & not any remaine behind when it is opened.

Now when the modell is thus made of tile-shread, which you may doe great or little at your pleasure, then with Lime, Haire and Beasts blood mixed together, you shall couer the bottome at least two inches thick, laying leuell and plaine as is before shewed: which done, you shall also couer all the sides and top, both within and without with the same matter, at least a good fingers thicke, and the maine wall of the whole Cesterne shall bee a full foot in thicknes, as well for strength and durablenesse, as for other priuate reasons for the holding the graine and water, whose poyze and weight might otherwise indanger a weaker substance. And thus much concerning the Malt house, and those seuerall accommodations which doe belong vnto the same.

*The manner
how to make
Malt.*

I will now speake a little in generall as touching the Art, skill and knowledge of Malt making, which I haue referred to the conclusion of this Chapter, because who soeuer is ignorant in any of the things before spoken of, cannot by any meanes euer attaine to the perfection of most true and most thriftie Malt-making: To begin then with this Art of making, or (as some terme it) melting of Malt, you shall first (hauing propormioned the quantitie you meane to steepe, which should euer be answerable to the continent of your Cesterne, and your Cesterne to your flowres) let it either run downe from your vpper Garner into the Cesterne, or otherwise be carried into your Cesterne as you shall please, or your occasions desire, and this Barley would by all meanes be very cleane, and neatly drest; then when your Cesterne is filled, you shall from your Pumpe or Well conuey the water into the Cesterne, till all the Corne be drencht, and that the water floate aboue it: if there be any Corne that will not sinke, you shall with your hand stirre it about, and

and wet it, and so let it rest and cover the Cesterne; and thus for the space of three nights you shall let the corne steepe in the water. After the third night is expired, the next morning you shall come to the Cesterne, and plucke out the plug or bung-sticke, which stoppeth the hole in the bottome of the Cesterne, and so draine the water cleane from the Corne, and this water you shall by all meanes save, for much light Corne and others will come forth with this draine-water, which is very good Swines meate, and may not be lost by any good huswife. Then having drained it, you shall let the Cesterne drop all that day, and in the evening with your shouell you shall empty the Corne from the Cesterne unto the Malt-flowre, and when all is out, and the Cesterne cleansed, you shall lay all the wet corne on a great heape round or long, and flat on the top; and the thickness of this heape shall be answerable to the season of the yeere; for if the weather bee extreme cold, then the heape shall be made very thicke, as three or foure foote, or more, according to the quantitie of the graine; but if the weather be temperate and warme, then shall the heape be made thinner, as two foote, a foote and a halfe, or one foote, according to the quantitie of the graine. And this heape is called of Maltsters a Couch or Bed of raw Malt. In this couch you shall let the Corne lie three nights more without stirring, and after the expiration of the three nights, you shall looke vpon it, and if you find that it beginneth but to sprout (which is called coming of Malt) though it bee neuer so little, as but the verie white end of the sproute peeping out (so it be in the outward part of the heape or Couch) you shall then breake open the Couch, and in the midst (where the Corne lay neerest) you shall find the sprout or Come of a greater largenesse; then with your shouell

*The drying
of Maile.*

thouell you, shall turne all the outward part of the conch inward, and the inward outward, and make it at least three or foure times as big as it was at the first, and so let it lie all that day and night, and the next day you shall with your shouell turne the whole heape ouer againe, increasing the largenes, and making it of one indifferent thicknesse ouer all the flowre; that is to say, not aboue a handfull thicke at the most, not failing after for the space of fourteene dayes, which doth make vp full in all three weeks, to turn it all ouer twice or thrice a day according to the season of the weather, for if it be warme, the maile must be turned finer; if coole, then it may lie closer, thicker and longer together; and when the three weeks is fully accomplished, then you shall (having bedded your kilne, and spread a cleane haire-cloth thereon) lay the maile as thinne as may be (as about three fingers thicknes) vpon the haire-cloth, and so drie it with a gentle and soft fire, euer and anon turning the maile (as it drieth on the kilne) ouer and ouer with your hand, till you finde it sufficiently well dried, which you shall know both by the tast when you bite it in your mouth, & also by the falling off of the come or prout, when it is thoroughly dried. Now as soon as you see the come beginne to flicke, you shall in the turning of the maile rub it well betweene your hands, and scower it, to make the come fall away; then finding it all sufficiently dried; first put out your fire, then let the maile coole vpon the kilne for foure or fve houres, and after raising vp the foure corners of the haire-cloth, and gathering the maile together on a heape, empy it with the come and all into your garners, and there let it lie (if you haue not present occasion to vse it) for a moneth or two or thre to ripen; but no longer, for as the Come or dust of the kilne, for such a space melloweth and ripeneth the

the Malt, making it better both for sale or expence, so to
lie to long in it doth ingender Weetell, Wormes and
Vermine which doe destroy the Graine.

Now for the dressing and clenſing of Malt at ſuch time
as it is either to be ſpent in the houſe, or ſold in the Mar-
ket, you ſhall firſt winnow it with a good wind either
from the ayre, or from the Fan; and before the winnow-
ing you ſhall rub it exceeding well betweene your hands
to get the Come or ſproutings cleane away: for the beau-
tie and goodneſſe of Malt is when it is moſt ſmug, cleane,
bright, and likeſt to Barley in the view, for then there is
leaſt waſte and greateſt profit: for Come and duſt drin-
kebr up the liquor, and giues an ill taſte to the drinke. Af-
ter it is well rubd and winnowed, you ſhall then ſee it ouer
in a fine ſiue, and if any of the Malt be vnclenſed, then rub
it againe in the ſiue till all bee pure, and the rubbings will
ariſe on the top of the ſiue, which you may caſt off at plea-
ſure, and both theſe rubbings from the ſiue and the Chaffe
and duſt which cometh from the winnowings ſhould
be kept, for they are very good Swines meate, and
feede well mixt either with whay or ſwillings: and thus
after the Malt is red, you ſhall either ſtacke it vp for eſpe-
ciall uſe, or put it into a well clenſed Garner, where it may
lie till there be occaſion for expence.

*The dressing
of Malt.*

Now there be certaine obſervations in the making of
Malt, which I may by no meanes omit: for though diuers
opinions doe diuerſly argue them, yet as neere as I can, I
will reconcile them to that truth, which is moſt conſonant
to reaſon, and the rule of honeſtie and equalitie.

Firſt, there is a difference in mens opinions as touching
the conſtant time for the mellowing and making of the
Malt; that is, from the firſt ſteeping to the time of drying;
for ſome will allow both Far and Flowre hardly a fortnight

*Obſervati-
ons in the
making of
Malt.*

night, ſome a fortnight and two or three dayes, and doe
 giue this reaſon; firſt, they ſay it makes the Come look
 whiter and brighter, and doth not get ſo much the fully-
 ing and fouleneſſe of the flower, as that which lieth three
 weekes, which makes it a great deale more beautifull and
 ſo more fallable: next, it doth not come or ſhore out ſo
 much ſprout, as that which lieth a longer time, and ſo pre-
 ſerueth more heart in the graine, makes it bould and fuller,
 and ſo conſequently more full of ſubſtance, and able to
 make more of a little, then the other much of more; and
 theſe reaſons are good in ſhew, but not in ſubſtanti-
 truth: for (although I confeſſe that Come which lieth
 leaſt time of the flowre muſt be the whiteſt and brighteſt)
 yet that which wanteth any of the due time, can neither
 ripen, mellow, nor come to true perfection, and leſſe then
 three weekes cannot ripen Barley: for looke what time
 it hath to ſwell and ſprout, it muſt haue full that time to
 flouriſh, and as much time to decay: now in leſſe then a
 week it cannot do the firſt, & ſo in a week the ſecond, and
 in another weeke the third, ſo that in leſſe then 3. weekes
 a man cannot make perfit Malt. Againe, I confeſſe, that
 Malt which hath the leaſt Come, muſt haue the greateſt
 kernell, and ſo bee moſt ſubſtanti-; yet the Malt which
 putteth not out his full ſprout, but hath that moyſture
 (with too much haſte) driuen in which ſhould be expel-
 led, can neuer bee Malt of any long laſting, or profitable
 for indurance, becauſe it hath ſo much moyſt ſubſtance as
 doth make it both apt to corrupt & breed worms in moſt
 great abundance: it is moſt true, that this haſtie made Malt
 is faireſt to the eie, and will ſooneſt be vented in the Mar-
 ket; and being ſpent aſſone as it is bought, little or no loſſe
 is to be perceiued, yet if it be kept 3 or 4 months, or lon-
 ger (vnleſſe the place where it is kept be like a Hot-houſe)

it will so danke and giue againe, that it will be little better then raw Malt, and so good for no seruice without a second drying : besides, Malt that is not suffred to sprout to the full kindly, but is stopt as soone as it begins to peepe, much of that Malt cannot come at all, for the moystest graines doe sprout first, and the hardest are longer in breaking the huske ; now if you stop the graine on the first sprouts, and not giue all leisure to come one after another, you shall haue halfe Malt and halfe Barley, and that is good for nothing but Hens and Hogs Trough. So that to conclude, lesse then three weeks you cannot haue to make good and perfect Malt.

Next there is a difference in the turning of the Malt, for some (and those be the most men Malsters whatsoeuer) turne all their Malt with the shouell, and say it is most easie, most speedy, and dispatcheth more in an houre, then any other way doth in three; and it is very true, yet it scattereth much, leaueth much behind vnturn'd, and commonly that which was vndermost, it leaueth vndermost still, & so by some comming too much, & others not comming at all, the Malt is oft much imperfect, & the old saying made good, that too much haste, maketh waste. Now there are others (and they are for the most part weomen Malsters) which turne all with the hand, and that is the best, safest, & most certaine way; for there is not a graine which the hand doth not remoue & turne ouer & ouer, and layes euery feuerall heape or row of such an euene & iust thicknesse, that the Malt both equally cometh, & equally seasoneth together without defect or alteration: and though he that hath much Malt to make, will be willing to hearken to the swiftest course in making, yet he that will make the best Malt, must take such conuenient leisure, and imploy that labour which commeth neere to perfection.

Then there is another especiall care to bee had in the

coming or sprouting of Malt, which is, that as it must not come too little, so it must not by any meanes come too much, for that is the grossest abuse that may be: and that which we call come or sprouted too much is, when either by negligence for want of looking to the couch, and not opening of it, or for want of turning when the Malt is spread on the flowre, it come or sprout at both ends, which Husbands call Akerspyerd; such come by reason the whole heart or substance is driuen out of it, can be good for no purpose but the Swine-trough, and therefore you must haue an especiall care both to the well tending of the couch, and the turning the Malt on the flowre, and be sure (as neere as you can by the ordering of the couch, and happing the hardest graine inward and warmest) to make it all Come very indifferently together. Now if it so fall out that you buy your Barley, and happen to light on mixt graine, some being old Come, some new Come, some of the heart of the stärke, and some of the stadle, which is an ordinarie deceit with Husbandmen in the Market, then you may be well assured, that this graine can neuer Come or sprout equally together; for the new Come will sprout before the old, and the stadle before that in the hart of the stärke, by reason the one exceedeth the other in moistnesse: therefore in this case you shall marke well which cometh first, which will be still in the heart of the Couch, and with your hand gather it by it selfe into a separte place, and then heape the other together againe; and thus as it cometh and sprouteth, so gather it from the heape with your hand, and spread it on the flowre, and keepe the other still in a thicke heape till all be sprouted. Now lastly obserue, that if your Malt be hard to sprout or Come, and that the fault consist more in the bitter coldnes of the season, then any defect of the come,

come, that then (besides the thicke and close making of the heape or couch) you faile not to couer it ouer with some thicke wollen clothes, as course Couerlids, or such like stuffe, the warmth whereof will make it Come presently: which once perceiued, then forthwith vncloth it, and order it as aforesaid in all points. And thus much for the Art, order, skill & cunning belonging to Maltmaking.

Now as touching the making of Oates into Malt, which is a thing of generall vse in many parts of this Kingdome where Barley is scarce, as in *Chesheire, Lancasheire, much of Darbysheire, Devonshere, Cornwall,* and the like, the Art and skill is all one with that of Barley, nor is there any variation or change of worke, but one and the same order still to be obserued, onely by reason that Oates are more swift in sprouting, and apter to clutter, ball and hang together by the length of the sprout then Barley is, therefore you must not faile but turne them oftner then Barley, and in the turning bee carefull to turne all, and not leaue any vnmoued. Lastly, they will need lesse of the flowre then Barley wil, for in a full fortnight, or a fortnight and two or three dayes you may make very good and perfit Oat-malt. But because I haue a great deale more to speake particularly of Oates in the next Chapter, I will here conclude this, and aduise euery skilfull huswife to ioyne with mine obseruations her own tried experience, and no doubt but she shall find both profit and satisfaction.

*Of Oat-
malt.*

CHAP. VI.

Of the excellency of Oates, and the many singular vertues and uses of them in a family.

Oats although they are of all manner of graine the cheapest, because of their generalitie being a graine

of that goodnesse and hardnesse, that it will grow in any soyle whatsoeuer, be it neuer so rich, or neuer so poore, as if Nature had made it the onely louing companion & true friend to mankinde; yet is it a graine of that singularity for the multiplicity of vertues, and necessary vses for the sustentance and support of the Family, that not any other graine is to be compared with it, for if any other haue equall vertue, yet it hath not equall value, and if equall value, then it wants many degrees of equall vertue; so that ioyning vertue and value together, no Husband, Housewife, or House-keeper whatsoeuer, hath so true and worthy a friend, as his Oates are.

*Verine of
Oates to
Cattell,*

To speake then first of the vertues of Oates, as they accrew to Cattell and creatures without doore, and first to begin with the Horse; there is not any food whatsoeuer that is so good, wholsome, and agreeable with the nature of a Horse, as Oates are, being a Prouendar in which hee taketh such delight, that with it he feedeth, trauelleth, and doth any violent labour whatsoeuer with more courage and comfort, then with any other food that can be inuented, as all men know, that haue either vse of it, or Horses; neither doth the Horse euer take surfeit of Oates, (if they be sweet and dry) for albe he may well be gluttred or stalled vpon them (with indiscreet feeding) and so refuse them for a little time, yet he neuer surfeith, or any present sickness followeth after; whereas no other graine but glut a Horse therewith, and instantly sickness will follow, which shewes surfeit, and the danger is oft incurable: for we reade in *Italy*, at the siege of *Naples*, of many hundred Horses that dyed on the surfeit of wheate; at *Rome* also dyed many hundred Horses of the plague, which by due prooffe was found to proceed from a surfeit taken of peason & fetches; and so I could runne ouer all other graines, but it is need-

needleſſe, and farre from the purpoſe I haue to handle: ſuffice it, Oates for Horſes are the beſt of all foodes whatſoener, whether they be but onely cleane threſht from the ſtraw, and ſo dried, or conuerted to Oatmeale, and ſo ground and made into Bread; Oates boyl'd and giuen to a Horſe whiſt they are coole and ſweet, are an excellent food for any Horſe in the time of diſeaſe, pouerty, or ſickneſſe, for they ſcower and fat exceedingly.

In the ſame nature that Oates are for Horſes, ſo are they for the Aſſe, Mule, Camell, or any other Beaſt of burthen.

If you will feede either Oxe, Bull, Cow, or any Neare whatſoener, to an extraordinary height of fatneſſe, there is no food doth it ſo ſoone as Oates doth, whether you giue them in the ſtraw, or cleane threſht from the ſheafe, and well winnowed; but the winnowed Oate is the beſt, for by them I haue ſeene an Oxe fed to 20 pound, to 24 poūd, and 30 pounds, which is a moſt vnreaſonable reckoning for any beaſt, onely fame & the tallow hath bin precious.

Sheepe or Goats may likewise be fed with Oates, to as great price and profit as with Peas, and Swine are fed with Oates, either in raw Malt, or otherwiſe, to as great thickneſſe as with any graine whatſoener; onely they muſt haue a few Peaſe after the Oates to harden the fat, or elſe it will waſte, and conſume in boyling. Now for holding Swine, which are onely to be preſerued in good fleſh, nothing is better then a thin mange made of ground Oates, whey, Butter-milke, or other ordinary waſhe or ſwillings, which either the Dayry, or Kitchin affordeth; nor is there any more ſoueraigne or excellent meate for Swine in the time of ſickneſſe, then a mange made of ground Oates and ſweete Whey, warmed luke-warme on the fier, and mixt with the powder of Raddle, or red Oaker.

Nay,

Nay, if you will goe to the matter of pleasure, there is not any meate so excellent for the feeding, and wholesome keeping of a kenell of hounds, as the Mauge made of ground Oates and scalding water, or of beefe-broth, or any other broth, in which flesh hath been sodden: if it be for the feeding, strengthening and comforting of Grey-hounds, Spaniels, or any other sort of tenderer Dogges, there is no meat then sheeps-heads, haire and all, or other intralls of sheepe chopt and well sodden, with good store of Oate-meale.

Now for all manner of Poultrye, as Cocks, Capons, Hens, Chickens of great size, Turkeys, Geese, Ducks, Swannes and such like, there is no food feedeth them better then Oates, and if it be the young breede of any of those kinds, euen from the first hatching or disclosing, till they be able to shift for themselves, there is no food better whatsoeuer then Oate-meale greetes, or fine Oate-meale, either simple of it selfe, or else mixt with milke, drinke, or else new made Urine.

*Virtue of
oates.*

Thus much touching the vertues and quality of Oates or Oate-meale, as they are seruiceable for the vse of Cattle and Poultrye. Now for the most necessarie vse thereof for man, and the generall support of the familie, there is no graine in our knowledge answerable vnto it; first, for the simple Oate it selfe (excepting some particular physicke helpes, as frying them with sweete butter, and putting them in a bag, and very hot applied to the belly or stomack to auoyde collick or windinesse, and such like experiments) the most especial vse which is made of them is for Malt to make Beere or Ale of, which it doth exceeding wel, and maintaineth many Townes and Countries; but the Oate-meale which is drawne from them, being the heart and kernell of the Oate, is a thing of much rarer price

price and estimation; for to speake troth, it is like Salt of such a generall vse, that without it hardly can any Family be maintained: therefore I thinke it not much amisse to speake a word or two touching the making of Oatmeale, you shall vnderstand then, that to make good and perfit Oate-meale, you shall first drie your Oates exceeding well, and then put them on the Mill, which may either be Water-mill, Wind-mill, or Horse-mill (but the Horse-mill is best) and no more but crush or hull them; that is, to carrie the stones so large, that they may no more but crush the huske from the Kirnell: then you shall winnow the hulls from the kirkels either with the wind or a Fan, and finding them of an indifferent cleannesse (for it is impossible to hull them all cleane at the first) you shall then put them on againe, and making the Mill goe a little closer, run them through the Mill againe, and then winnow them ouer againe, and such greets or kirkels as are cleane hull and well run you may lay by, and the rest you shall run through the Mill againe the third time, and so winnow them againe, in which time all will be perfit, and the greets or full kirkels will seperate from the smaller Oate-meale; for you shall vnderstand, that at this first making of Oate-meale, you shall euen haue tye sorts of Oate-meales; that is, the full whole greete or kirkell, and the small dust Oate-meale: as for the course hulls or chaffe that commeth from them, that also is worthy sauing; for it is an excellent good Horse-prouender for any plow or labouring Horses, being mixt with either Beanes, Pease, or any other Pulse whatsoever.

*Making of
oate-meale.*

Now for the vse and vertues of these two severall kinds of Oate-meales in maintaining the Family, they are so many (according to the many customes of many Nations) that it is almost impossible to reckon all; yet (as neere

*The vertues
of oate-
meale.*

as I can) I will impart my knowledge, and what I haue
 rane from relation : firſt, for the ſmall duſt or meale Oat-
 meale, it is that with which all pottage is made and thick-
 ned, whether they be meate-pottage, milke-pottage, or
 any thicke or elſe thin grewell whatſoeuer, of whole
 goodneſſe and whoſomneſſe it is needleſſe to ſpeake, in
 that it is frequent with euery experience : alſo with this
 ſmall Meale Oat-meale is made in diuers Countries ſixe
 ſeueral kinds of very good and whoſome bread, euery
 one finer then other, as your Anacks, Tanacks, and ſuch
 like. Alſo there is made of it both thicke and thin Oaten-
 Cakes, which are very pleaſant in taſte, and much eſtee-
 med : but if it be mixed with fine Wheate-meale, then it
 maketh the moſt delicate and daintie Oate-cake, either thicke
 or thin, ſuch as no Prince in the world but may haue them
 ſerued to his table; alſo this ſmall Oate-meale mixed with
 blood, and the liver of either Sheepe, Calfe or Swine,
 maketh that pudden which is called the Haggas or Hag-
 gus of whole goodneſſe it is in vaine to boyle, becauſe
 there is hardly to bee found a man that doth not affect
 them. And laſtly, from this ſmall Oat-meale by oft ſtee-
 ping it in water and clenſing it, and then boyling it to a
 thicke and ſuſſe Telly is made that excellent diſh of meat,
 which is beſteemed in the Weſt parts of this Kingdome,
 which they call Waſh-brew, and in Cheſſhire and Lanke-
 ſhire they call it Flamerie or Flamerie, the whoſomnes
 and rare goodneſſe, nay, the very Phyſick helpes thereof,
 being ſuch and ſo many, that I my ſelfe haue heard a very
 reuerend and worthily renowned Phyſition ſpeake more
 in the commendations of that meate, then of any other
 foode whatſoeuer: and certaine it is, that you ſhall not
 heare of any that euer did ſurſeire of this Waſh-brew or
 Flammerie; and yet I haue ſcene them of very daintie

and fickle stomachs which haue eaten great quantities thereof, beyond the proportion of ordinary meates. Now for the manner of eating this meate, it is of diuers diuerly vsed; for some eate it with Honie, which is reputed the best sauce; some with Wine, either Sacke, Clarrer or White; some with strong Beere, or strong Ale, and some with milke, as your abilitie, or the accommodations of the place will administer. Now there is deriued from this Wash-brew another courser meate, which is as it were the dregges, or grosser substance of the Wash-brew, which is called girt-brew, which is a well filling and sufficient meate, fit for seruants and men of labour, of the commendations whereof, I will not much stand, in that it is a meate of harder digestion, and fit indeed but for strong able stomachs, and such whose toyle and much sweate both liberally spendeth euill humors, and also preserveth men from the offence of fulnes and surfeits.

Now for the bigger kind of Oate-meale, which is called Gerts, or Corne Oate-meale, it is of no lesse vse then the former, nor are their fewer meates compounded thereof: for first, of these Gerts are made all sorts of Puddings, or Pots (as the West-countrie tearmes them) whether they be blacke, as those which are made of the blood of Beasts, Swine, Sheepe, Geesse, Red or Fallow Deere, or the like, mixt with whole Gerts, Suet and wholsome Hearbs: or else white, as when the Gerts are mixt with good Creame, Egges, Bread-crummes, Suet, Currans, and other wholsome Spices. Also of these Gerts are made the good Friday pudding, which is mixt with eggs, milt, suet, peniroyall, & boild first in a linnen bag, & then stript and butterd with sweet butter. Againe, if you rost a Goose, & stop her belly with whole gerts, beaten together with eggs, and after mixt with the graue, there cannot bee a

better or more pleasanter sauce: nay, if a man bee at sea in any long travel, he cannot eate a more wholesome and pleasant meate then these whole greetes boild in water till they burst, and then mixt with butter, and so eaten with spoones; which although sea-men call simply by the name of Loblolly, yet there is not any meate how significant soever the name be, that is more toothsome or wholesome. And to conclude, there is no way or purpose whatsoever to which a man can vse or imploy Rice: but with the same seasoning and order you may imploy the whole greetes of Oate-meale, and have full as good and as wholesome meate, and as well tasted; so that I may well knit up this Chapter with this aprobatation of Oate-meale, that the little charge and great benefit considered, it is the very crowne of the Huswifes garland, and doth more grace her able and her knowledge, then all graines whatsoever; neither indeed can any Familie or Household bee well and thriftily maintained, where this is either scant or wanting. And thus much touching the nature, worth, vertues, and great necessitie of Oates and Oate-meale.

CHAP. XLII. Of the making of Oate-meale. Oate-meale is made of Oates which are made of the blood of Beasts, Swine, Sheep, Goats, Red or Fallow Deere, or like mixt with whole Guts, sweet and wholesome Herbs: or else white, as when the Guts are mixt with good Creams, Eggs, Bread-crummes, Sweet Curries, and other wholesome Spices. Also of these Guts are made the good Friday pudding, which is mixt with egg-milk, butter, and a little salt in a linnen bag, & then steamed in a belly with whole Guts, beaten together with eggs, buttered with sweet butter. Again, if you roll a Goose, & stop her belly with whole Guts, beaten together with eggs, and mixt with the graine, there cannot bee a better

CHAP. VII.

Of the Office of the Brew-house, and the Bake-house, and the necessarie things belonging to the same.



When our English Housewife knowes how to preserve health by wholsome Physick, to nourish by good meate, and to clothe the bodie with warme garments, she must not then by any meanes bee ignorant in the provision of bread and drinke; shee must know both the proportions and compositions of the same. And for as much as drinke is in every house more generally spent then bread, being indeed (but how well I know not) made the very substance of all entertainment; I will first beginne with it, and therefore you shall know that generally our kingdome hath out two kindes of drinckes, that is to say, Beere and Ale, but particularly fowre, as Beere, Ale, Perry and Cider, and to these we may adde two more, as Meede and Metheglin, two compound drinckes of honie and hearbes, which in the places where they are made, as in *wales* and the marches, are renowned for exceeding wholsome and cordiall.

*Diuersties
of drinckes.*

To speake then of Beere, although there bee diuers kindes of tastes and strength thereof, according to the allowance of malt, hoppe, and age giuen vnto the same; yet indeed there can be truly sayd to be but two kindes thereof; namely, ordinary beere and March beere, all other beeres being deriued from them.

Strong beere

Touching ordinary Beere, which is that wherewith either Nobelman, Gentleman, Yeoman, or Husbandman shall maintaine his family the whole yeere; it is meet first

*Of ordinary
ry Beere.*

that our *English Houſ-wife* reſpect the proportion or allowance of malt due to the ſame, which amongſt the beſt Houſbands is thought moſt conuenient, and it is held, that to draw from one quarter of good malt three Hogſheads of beere, is the beſt ordinary proportion that can be allowed, and hauing age and good caſke to lie in, it will be ſtrong enough for any good mans drinking.

*Of brewing
ordinary
Beere.*

Now for the brewing of ordinary Beere, your malt being well ground and put in your Maſh-fat, and your liquor in your leade ready to boile, you ſhall then by little and little with ſcoopes or pailles put the boiling liquor to the mault, and then ſtirre it euen to the bottome exceedingly well together (which is called the maſhing of the malt) then the liquor ſwimming in the top couer all ouer with more malt, and ſo let it ſtand an howre and more in the maſh-fat, during which ſpace you may if you pleaſe heate more liquor in your lead for your ſecond or ſmall drinke; this done, plucke vp your maſhing ſtroame, and let the firſt liquor runne gently from the malt, either in a cleane trough or other veſſels prepared for the purpoſe, and then ſtopping the maſh-fat againe, put the ſecond liquor to the mault and ſtirre it well together; then your leade being emptied put your firſt liquor or wort therein, and then to euery quarter of malt put a pound and a half of the beſt hops you can get; and boile them an hower together, till taking vp a diſhfull thereof you ſee the hops ſhrinke into the bottome of the diſh; this done put the wort through a ſtraight ſiue which may draine the hoppes from it into your cooler, which ſtanding ouer the Guil-fat, you ſhall in the bottom thereof ſet a great bowle with your barme, and ſome of the firſt wort (before the hops come into it mixt together) that it may riſe therein, and then let your wort drop or run gently into the diſh with

with the barme which stands in the Guil-fat, and this you shall do the first day of your brewing, letting your cooler drop all the night following, and some part of the next morning, and as it droppeth if you finde that a blacke skumme or mother riseth vpon the barme, you shall with your hand take it off and cast it away, then nothing being left in the cooler, and the beere well risen, with your hand stirre it about and so let it stand an hower after, and then beating it and the barme exceeding well together, tunne it vp in the Hogsheads being cleane washt and scalded, and so let it purge: and herein you shall obserue not to tun your vessels too full, for feare thereby it purge too much of the barm away: when it hath purged a day and a night, you shall close vp the bung holes with clay, and only for a day or two after keepe a vent-hole in it, and after close it vp as close as may bee. Now for your second or small drinke which are left vpon the graine, you shall suffer it there to stay but an hower or a little better, and then drain it off also, which done, put it into the lead with the former hops and boile the other also, then cleere it from the hops and couer it verie close till your first beere be tunn'd, and then as before put it also to barme and so tunne it vp also in smaller vessels, and of this second beere you shall not draw aboue one Hogshead to three of the better. Now there be diuers other waies & obseruations for the brewing of ordinarie Beere, but none so good so easie, so readie and quicklie performed as this before shewed: neither will anie beere last longer or ripen sooner, for it may bee drunke at a fortnights age, and will last as long and liuely. Now for the brewing of the best March Beere you shall allow to a Hog's-head three of a quarter of the best malt well ground: then you shall take a pecke of pease, halfe a pecke of Wheate, and halfe a pecke of Oates and grind them

*Of brewing
the best
March
beere.*

them all very well together, and then mix them with your malt : which done, you ſhall in all points brew this beere as you did the former ordinary beere: onely you ſhall allow a pound & a halfe of hops to this one Hogſhead: and whereas before you drew but two ſorts of beere : ſo now you ſhall draw three : that is a Hogſ-head of the beſt, and a Hogſ-head of the ſecond , and halfe a Hogſ-head of ſmall beere without anie augmentation of hops or malt.

This march Beere would be brewd in the moneths of *March* or *April*, and ſhould if it have rightlie a whole yeere to ripen : it will laſt two, three and foure yeers if it lie coole and cloſe, and indure then dropping to the laſt drop, though with neuer ſo much leaſure.

*Brewing of
ſtrong ale.*

Now for the brewing of ſtrong Ale, becauſe it is drink of no ſuch long laſting as Beere is, therefore you ſhall brew leſſe quantitie at a time thereof, as two buſhels of northerne meaſure, (which is foure buſhels or half a quarter in the South) at a brewing, and not aboue, which will make foureene gallons of the beſt Ale. Now for the maſhing and ordering of it in the maſh-fat, it will not differ any thing from that of beere ; as for hops, although ſome uſe not to put in any, yet the beſt Brewers thereof wil allow to foureene gallons of Ale a good eſpen full of Hops, and no more, yet before you put in your Hops, as ſoone as you take it from the graines you ſhal put it into a veſſell and change it, or blinke it in this manner: put into the Wort a handfull of Oake bowes and a Pewter diſh, and let them lie therein till the Wort looke a little paler then it did at the firſt, and then preſently take out the diſh and the leaſe, and then boile it a full houre with the Hops as aforeſaid, and then claſſe it, and ſet it in veſſels to coole; when it is no more but milke warme, hauing ſet your Barme to riſe with ſome ſweet Wort: then put all into the guilfat

guilfat, and as soone as it riseth, with a dish or bowle beate it in, and so keepe it with continuall beating a day and a night at least, and after tun it. From this Ale you may also draw halfe so much very good middle Ale, and a third part very good small Ale.

Touching the brewing of Bottle-ale, it differeth nothing at all from the brewing of strong Ale, onely it must be drawne in a larger proportion, as at least twentie gallons of halfe a quarter, and when it comes to bee changed you shall blinke it (as was before shewed) more by much then was the strong Ale, for it must be pretty and sharpe, which giueth the life and quicknes to the Ale: and when you tun it, you shall put it into round bottles with narrow mouths, and then stopping them close with corke, set them in a cold sellar vp to the waist in sand, and be sure that the cokes be fast tied in with strong packethrid, for feare of rissing out, or taking vent, which is the ytter spoile of the ale. Now for the smal drinke arising from this bottle Ale, or any other beere or ale whatsoeuer, if you keep it after it is blinkt and boiled in a close vessel, and then put it to barm euery morning as you haue occasion to vse it, the drinke will drinke a great deale the fresher, and bee much more liuelie in taste.

As for the making Perry and Cider, which are drinks much vsed in the west parts, and other Countries wel stored with fruit in this kingdome, you shall know that your Perry is made of Peares only, and your Cider of Apples; and for the manner of making thereof, it is done after one fashion, that is to say, after your Peares or Apples are well pickt from stalkes, rottenesse and all manner of other filth, you shall put them in the presse mill which is made with a mil-stone running round in a circle, vnder which you shall crush your Peares or Apples, and then straining

H h

them

*Brewing of
Bottle Ale.*

*Of making
Perry or Cy-
der.*

them through a bagge of haire-cloth, tunne vpon the ſame after it hath bene a littl ſetled into Hogſ-heads, Barrels and other cloſe veſſels.

Now after you haue preſſed all, you ſhall ſaue that which is within the haire cloth bagge, and putting it into ſeueral veſſels, put a pretty quantity of water thereunto, and after it hath ſtood a day or two, and hath bene well ſtirred together, preſſe it ouer alſo againe, for this will make a ſmall perry or cider, and muſt be ſpent firſt. Now of your beſt ſider that which you make of your ſummer or ſweet fruites, you ſhall call ſummer or ſweet cider or perrie, and that you ſhall ſpend firſt alſo; and that which you make of the winter and hard fruites, you ſhall call winter and ſowre cider, or perry; and that you may ſpend laſt, for it willen dure the longeſt.

Of Baking.

Thus after our Engliſh Huſwife is experienc'd in the brewing of theſe ſeueral drinks, ſhe ſhall then looke into her Bake-houſe, and to the baking of all ſorts of bread, either for Maſters, Seruants, or Hinds, and to be ordering and compounding of the meale for each ſeueral uſe.

Ordering of Meales.

To ſpeake then firſt of meales for bread, they are either ſimple or compound, ſimple, as Wheate and Rie, or compound, as Rie and Wheate mixt together, or Rie, Wheate and Barley mixt together; and of theſe the oldeſt meale is euer the beſt, and yeeldeth moſt ſo it be ſweet and vntainted, for the preſeruatiſon wherof, it is meet that you clenſe your meale well from the branne, and then keepe it in ſweet veſſels.

Baking man- chets.

Now for the baking of bread of your ſimple meales, your beſt and principall bread is manchiet, which you ſhall bake in this manner; firſt your meale being ground vpon the black ſtones if it be poſſible, which make the whitteſt flower, and boulded through the fineſt boulding cloth, you

you shall put it into a clean Kimmel, and opening the flower hollow in the midst, put into it of the best Ale-barme the quantity of three pints to a bushell of meale, with some salt to season it with: then put in your liquor reasonable warme and kneade it very well together with both your hands and through the brake, or for want thereof, fold it in a cloth, and with your feete tread it a good space together, then letting it lie an howre or thereabouts to swell take it forth and mold it into manchets, round, and flat, scotch about the wast to giue it leaue to rise, and prick it with your knife in the top, and so put it into the Ouen, and bake it with a gentle heate.

To bake the best cheate bread, which is also simply of wheate onely, you shall after your meale is drest and bouldred through a more course boulder then was vied for your manchets, and put also into a clean tub, trough, or kimmel, take a sower leauen, that is, a peece of such like leauen saued from a former batch, and well fild with salt, and so laid vp to sower, and this sower leauen you shall breake in small peeces into warme water, and then straine it, which done make a deepe hollow hole, as was before said in the midst of your flower, and therein power your strained liquor; then with your hand mixe some part of the flower therewith, till the liquor be as thicke as pancake batter, then couer it all ouer with meale, and so let it lie all that night, the next morning stirre it, and all the rest of the meale wel together, and with a little more warme water, barme, and salt to season it with, bring it to a perfect leauen, stiffe, and firme; then knead it, breake it, and tread it, as was before said in the manchets, and so mould it vp in reasonable bigge loaues, and then bake it with an indifferent good heat: and thus according to these two examples before shewed, you may bake any bread leauend or

*Baking
cheate bread.*

vnleauend whatsoeuer, whether it be simple corne, as Wheate or Rie of it selfe, or compound graine as wheat and rie, or wheat and barley, or rie and barley, or any other mixt white corne; only because Rie is a little stronger grainethen wheate, it shall be good for you to put your water a little hotter then you did to your wheate.

*Baking of
brown bread.*

For your browne bread, or bread for your hinde-seruants, which is the coursest bread for mans vse, you shall take of barley two bushels, of pease two pecks, of wheat or Rie a pecke, a peck of malt; these you shall grind altogether and dresse it through a meale siue, then putting it into a sower trough set liquor on the fire, and when it boils let one put on the water, and another with a mash-rudder stir some of the flower with it after it hath been seasoned with salt, and so let it be till the next day, and then putting to the rest of the flower, worke it vp into stiffer leauen, then mould it and bake it into great leaues with a very strong heate: now if your trough be not sower enough to sower your leauen, then you shall either let it lie longer in the trough, or else take the helpe of a sower leauen with your boiling water: for you must vnderstand, that the hotter your liquor is, the lesse will the smell or ranknesse of the pease be receiued. And thus much for the baking of any kinde of bread, which our *English Housewife* shall haue occasion to vse for the maintenance of her family.

*Generall
observations
in the brew-
house and
Bake-house.*

As for the generall obseruations to be respected in the Brew-house or Bake-house, they be these: first, that your Brewhouse be seated in so conuenient a part of the house, that the smoke may not annoie your other more priuate roomes; then that your furnace bee made close and hollow for sauing fewell, and with a vent for the passage of smoake least it taint your liquor; then that you preferre a copper before a lead, next that your Mash-fat be euer neere

neereſt to your leade, your cooler neereſt your Maſh-fat, and your Guilfat vnder your cooler, & adioining to them all ſeuerall cleane tubs to receiue your worts & liquors: then in your Bake-houſe you ſhall haue a faire boulting houſe with large Pipes to boulte meale in, faire troughes to laie leauen in, and ſweet ſaſes to receiue your branne: you ſhall haue boulders, ſearſes, raunges and meale ſiues of all ſorts both fine & coarſe, you ſhall haue faire tables to mould on, large onens to bake in the ſoales thereof rather of one or two intire ſtones then of many bricks, and the mouth made narrow, ſquare and eaſie to be cloſe covered: as for your peeles, cole-rakes, maukins and ſuch like, though they be neceſſary yer they are of ſuch general uſe they need no farther relation. And thus much for a full ſatiſfaction to all the Huſbands and Huſwifes of this kingdome touching Brewing, Baking, and all what elſe appertaineth to either of their offices.

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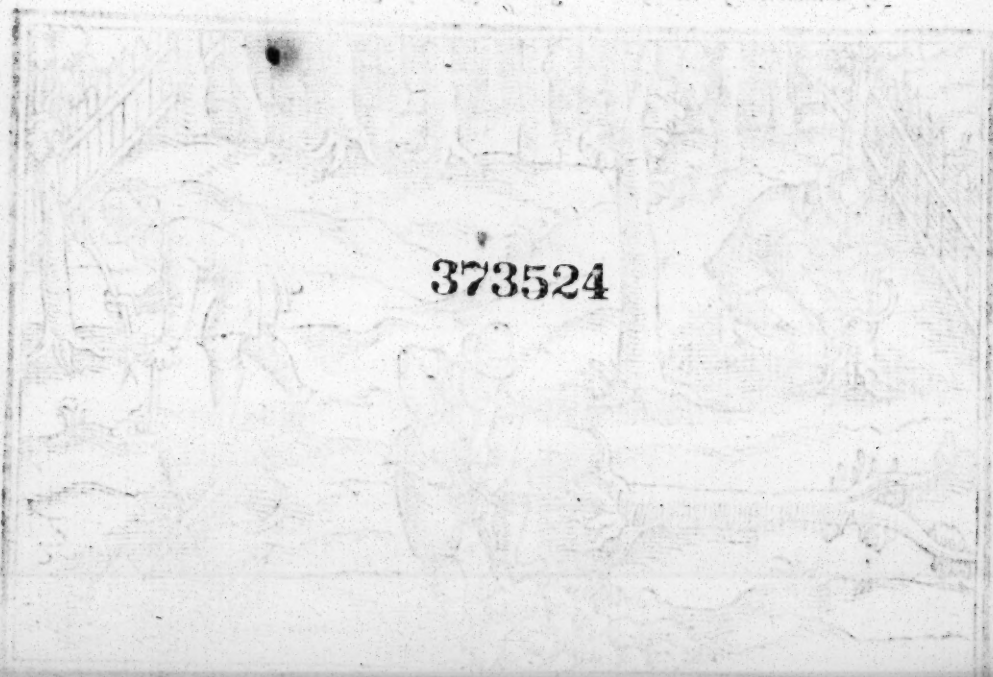
any ground good, for a new Orchard : Together with the Names
and generally for the whole kingdom of England, as in names
respects, manner, and all probable reasons and observations.

With the Countess of Huntingdon's Garden for herbs of common use, their
several sorts, and the manner of their culture for fruit, and
plots for the best ordering of Grounds and Walks.

As also

The Husbandry of Trees, and the best manner of setting, and
expedient of a new Orchard, and how to be corrected and
much enlarged, as in this Edition.

Whereunto is newly added the Art of propagating Plants, with the true ordering
of all manner of Trees, and the best manner of setting, and



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TO THE RIGHT W O R S H I P F U L L,

SIR HENRY BELOSSES
Knight and Baronet.

Worthy Sir,



Hen in many yeeres by long experience I had furnished this my Northerne Orchard and Countrey Garden with needfull plants and vsfull herbes, I did impart the view thereof to my friends, who resorted to me to conferre in matters of that nature, they did see it, and seeing it desired, and I

must not denie now the publishing of it (which then I allotted to my priuate delight) for the publike profit of others. Wherefore, though I could pleade custome the ordinary excuse of all Writers, to chuse a Patron and Protector of their Workes, and so shroud my selfe from scandall vnder your honourable fauour, yet haue I certaine reasons to excuse this my presumption: First, the many cour-

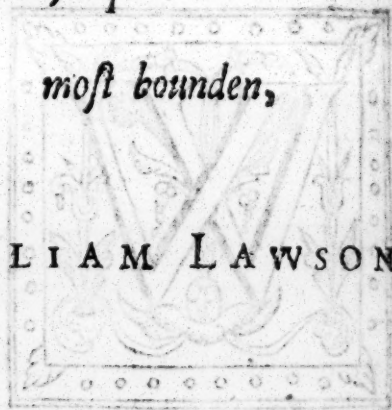
The Epistle Dedicatory.

testies you haue vouchsafed me. Secondly, your delightfull skill in matters of this nature. Thirdly, the profit which I receiued from your learned discourse of Fruit-trees. Fourthly, your animating and assisting of others to such endeouours. Last of all, the rare workes of your owne in this kinde : all which to publish vnder your protection, I haue aduentured (as you see.) Vouchsafe it therefore entertainment, I pray you, and I hope you shall finde it not the vnprofitablest seruant of your retinue : for when your serious employments are ouerpasse, it may interpose some commoditie, and raise your contentment out of varietie.

Your Worships

most bounden,

WILLIAM LAWSON.





THE PREFACE

to all well minded.



Art bath her first originall out of experience, which therefore is called the Schoole-mistresse of fooles, because she teacheth infallibly, and plainly, as drawing her knowledge out of the course of Nature, (which neuer failes in the generall) by the senses, feelingly apprehending, and comparing (with the helpe of the minde) the workes of nature; and as in all other things naturall, so especially in Trees: for what is Art more than a provident and skilfull Collectrix of the faults of Nature in her particular workes, apprehended by the senses? As when good ground naturally brings forth thistles, trees stand too thicke, or too thin, or disorderly, or (without dressing) put forth unprofitable suckers, and such like. All which, and a thousand more, Art reformeth, being taught by experience: and therefore must we count that Art the surest, that stands upon experimentall rules, gathered by the rule of reason (not conceit) of all other rules the surest.

Whereupon haue I of my meere and sole experience, without respect to any former written Treatise, gathered these rules, and set them downe in writing, not daring to hide the least talent ginen me of my Lord and Master in Heauen: neither is this iniurious to any, though it differ from the common opinion

The Preface.

in diuers points, to make it knowne toothers, what good I haue found out in this facultie by long triall and experience. I confesse freely my want of curious skill in the Art of planting. And I admire and praise Plinie, Aristotle, Virgil, Cicero, and many others for wit and iudgement in this kinde, and leaue them to their times, manner, and seuerall Countries.

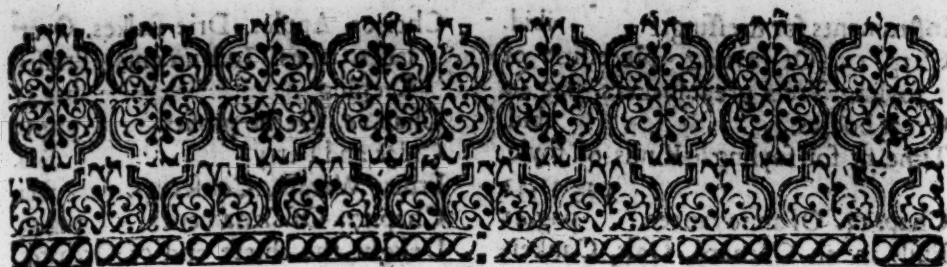
I am not determined (neither can I worthily) to set forth the praises of this Art: how some, and not a few, euen of the best, haue accounted it a chiefe part of earthly happinesse, to haue faire and pleasant Orchards, as in Hesperia and Theſſaly, how all with one consent agree, that it is a chiefe part of Husbandry (as Tully de senectute). and Husbandry maintaines the world; how ancient, how profitable, how pleasant it is, how many secrets of nature it doth containe, how loued, how much practised in best places, and of the best: This hath already beene done by many. I only aime at the common good. I delight not in curious conceits, as planting and graffing with the root upwards, inoculating Roses on Thornes, and such like, although I haue heard of diuers, proued some, and read of moe.

The Stationer hath (as being most desirous with me, to further the common good) bestowed much cost and care in hauing the Knots and Models by the best Artizan cut in great varietie, that nothing might be any way wanting to satisfie the curious desire of those that would make vse of this booke.

And I shew a plaine and sure way of planting, which I haue found good by 48. yeeres (and moe) experience in the North part of England: I preiudicate and enuie none, wishing yet all to abstaine from maligning that good (to them unknowne) which is well intended. Farewell.

Thine, for thy good,

W. L.



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THE BEST, SVREST, AND READIEST WAY TO make a good Orchard and Garden.

CHAP. I.

Of the Gardener, and his Wages.



Whoever desireth and endeuoureth to haue a pleasant, and profitable Orchard, must (if he be able) provide himselfe of a Fruiterer, religious, honest, skilfull in that faculty, and there withall painfull: By religious, I meane (because many thinke religion but a fashion of some to goe to Church) maintaining, and cherishing things religious: as Schooles of learning, Churches, Tythes, Church goods, and rights: And aboue all things, Gods word, and the Preachers thereof, so much as he is able, practising prayers, comfortable conference, mutual instruction to edifie, almes, and other workes of Charity, and all out of a good conscience.

Religious.

Honestie in a Gardener, will grace your Garden, and all your house, and helpe to stay vnbridled Serpents, giuing offence to none, not calling your name into question by dishonest acts, nor infecting your family by euill counsell or example. For there is no plague so infectious as Popery and knauery, he will not purloine your profit, nor hinder your pleasures.

Honest.

Concerning his skill, hee must not be a Schollist, to make shew of or take in hand that, which he cannot performe, especially in so weighty a thing as an Orchard: than the which, there can be no humane thing more excellent, either for pleasure

Skilfull.

sure or profit, as shall (God willing) be proued in the treatise following. But what an hindrance shall it be, not onely to the owner, but to the common good, that the unspeakable benefit of many hundred years, shall be lost, by the audacious attempt of a foolish and idle man.

Painfull.

The Gardner had not need be an idle, or lazye Lubber, for so your Orchard being a matter of such moment, will not prosper. There will euer be some thing to doe. Weedes are alwaies growing. The great mother of all liuing Creatures, the Earth, is full of seed in her bowels, and any stirring giues them heat of Sunne, and being laid nere day, they grow. Howles worke daily, though not alwaies alike. Winter herbes at all times will grow (except in extreme frost.) In Winter your young trees and herbes would be lightned of snow, and your Allies cleansed: drifts of snow will set Dære, Hares, and Conyes, and other noysome beasts ouer your walles and hedges, into your Orchard. When Summer cloathes your borders with greene and peckled colours, your Gardner must dress his hedges, and auerke warkes: watch his Bees, and hie them: distill his Roses, and other herbes, from your Summer Fruit to ripe, and craue your hand to pull them. If he haue a Garden (as he must need) to keepe, you must need call vpon him for good helpe, to end his labours which are endlesse, for no man is sufficient for these things.

Wages.

Such a Gardner as will conscionably, quietly and patiently trauell in your Orchard, God shall crowne the labors of his hands with largenesse, and make the clouds drop fatnesse vpon your trees, he will prouoke your loue, and earne his wages, and fers belonging to his place: The house being serued, fallen fruit, superfluous of herbes, and flowers, seeds, grasses, sets, and besides other assaile, that fruit which your bountifull hand shall reward him withall, will much augment his wages, and the profit of your Bees will pay you backe againe. If you be not able, nor willing to hire a Gardner, keepe your profits to your selfe, but then you must take all the paines: And for that purpose (if you want this faculty) to instruct you, haue I vnderaken these labours, and gathered these Rules, but chiefly respecting my countries god.

CHAP.

Moyft.

kepe moyfture, not onely the raine falling thereon, but alfo wa-
ter caft vpon it, or defcending from higher ground by sluices,
Conduits, &c. For I account moyfture in Summer very need-
full in the fople of trees, and drytneffe in Winter. Provided,
that the ground neither be boggie, nor the inundation be past 24
houres at any time, and but twice in the whole Summer, and
oft in Winter. Therefore if your plot be in a Bank, or have
defcent, make Trenches by degrees, Allies, Vallies, and fuch
like, so as the Water may be ftayed from paffage. And if too
much water be any hinderance to your walkes (for vyle walkes
don soone become an Orchard, and an Orchard then) raffe
your walkes with earth first, and then with Stones, as bigge as
Walnuts; and lastly, with gravell. In Summer you need not
doubt too much water from heauen, either to hurt the health of
your body, or of your trees. And if overflowing rubleth you af-
ter sundry waies, quench it then by dayes trenching about the
same, for this purpose digge the fople of the Orchard to re-
ceive moyfture, which I cannot approve: for the roots with dig-
ging are oftentimes hurt, and especially being digged by some
unskillfull servant. For the Gardiner cannot doe all himselfe,
And moreover, the rots of Apples and Peares, being laid neere
day, with the heat of the Sunne, will put forth suckers, which
are a great hinderance, and sometimes with euill guiding, the
deftruction of trees, vnlesse the deluing be very shallow, and the
ground laid herie leuell againe. Cherries and plummies without
deluing, will hardly or neuer (after twenty yeares) be kept
from such suckers, nor apples.

Grasse.

Grasse also is thought needfull for moyfture, so you let it not
touch the rotes of your trees: for it will breede mosse, and the
boall of your tree neere the earth would haue the comfort of the
sunne and ayre.
Some take their ground to bee too moist when it is not so, by
reason of waters standing thereon, for except in soure marshes,
springs, and continuall ouerflowings, no earth can be too moist.
Sandy and fat earth will auoid all water falling by receit. In
deed a stiffe clay will not receive the water, and therefore if it
be grassie or plaine, especially hollow, the water will abide,
and it will seme waterish, when the fault is in the want of
manuring, and other good dressing.

This

This plainesse which we require, had need be naturall, because to force an uneven ground will destroy the fruitfullnes. For every soile hath his crust next day wherein trees and herbes put their roottes, and whence they drawe their sap, which is the best of the soile, and made fertile with heate and cold, moisture and drought, and under which by reason of the want of the said temperature, by the said foure qualities, no tree nor herbe (in a manner) will or can put root. As may bee sene if in digging your ground, you take the weeds of most growth: as grasse or docks, (which will grow though they lye vpon the earth bare) yet bury them vnder the crust, and they will surely dye and perishe, and become manure to your ground. This crust is not past 15. or 18. inches deepe in good ground, in other grounds lesse. Where by appeares the fault of forced plaines, viz. your crust in the lower parts, is couered with the crust of the higher parts, and both with worse earth: your heights hauing the crust taken away, are become utterly barren: so that either you must force a new crust, or haue an euill soile. And be sure you leaue it, before you plant, lest you bee forced to remoue, or hurt your plants by digging, and casting amongst their roots. Your ground must be cleared as much as you may of stones, and gravel, walls, hedges, bushes and other weeds.

Natural-
ly plain.

Crust
of the
earth.

CHAP. III.

Of the Site.



There is no difference, that I find betwixt the necessity of a good soile, and a good site of an Orchard. For a good soile (as is before described) cannot want a good site, and if it doe, the fruit cannot be good, and a good site will much mend an euill soile. The best site is in low grounds, (and if you can) nere vnto a Riuer.

High grounds are not naturally fat. And if they haue any fatnesse by mans hand, the very descent in time doth wash it away. It is with grounds in this case as it is with men in a common wealth. Much will haue more: and once poore, seldome or neuer rich. The raine will scind, and wash, and the wind will blow fatnesse from the heights to the hollowes, where

Low and
neere a
Riuer.

it will abide, and fatten the earth though it were barren before.

Hence it is, that we haue seldome any plaine grounds, and low, barren: and as seldome any heights naturally fertill. It is unspeakable, what fatnesse is brought to low grounds by inundations of waters. Neither did I euer know any barren ground in a low plaine by a Riuer side. The goodnesse of the soile in Howl or Hollow-dernes, in *Yorkeshire*, is well knowne to all that know the Riuer Humber, and the huge bulkes of their Cattell there. By estimation of them that haue seene the low grounds in Holland, and Zealand, they farre surpasse the most Countries in Europe for fruitfulnessse, and onely because they lye so low. The world cannot compare with *Egypt*, for fertility, so farre as *Nilus* doth ouer-flow his bankes. So that a fitter place cannot be chosen for an Orchard, than a low plaine by a riuer side. For besides the fatnesse which the water brings, if any cloudy mist or raine be stirring, it commonly falls downe to, and followes the course of the Riuer. And where see we greater trees of bulk and bough, then standing on or nere the waters side? If you aske why the plaines in Holdernes, & such countries are destitute of woods? I answer that men and cattell (that haue put trees thence, from out of Plaines to void corners) are better then trees. Neither are those places without trees. Our old fathers can tell vs, how woods are decayed, & people in the roynth of trees multiplied. I haue stood somewhat long in this point, because some doe vtterly condemne a moist soile for fruit-trees.

A low ground is good to auoid the danger of winds, both for shaking down your vnripe fruit, and blowing down your trees. Fruit blowne vnripe, are small worth: and though they be ripe, yet being bzused with the fall, (especially if they be big) they are not good but for present vse. Trees the most (that I know) being laden with wood, for want of propping, and growing high, by the vnskillfulnessse of the Arborist, must needs be in continuall danger of the South-west, West, and North-west winds, especially in September and March, when the aire is most temperate from extreme heat, and cold, which are deadly enemies to great winds. Therefore chuse your ground low. Or if you be forced to plant in a higher ground, let high and strong walls, houses, and Trees, as Wall-nuts, Plane-trees, Oakes, and Ashes, placed in good order, be your fence for winds.

The

* Psal. 1. 3.
Eze. 17. 8.
Ecc. 39. 17.

Mark-
ham.

Winds.
chap. 13

The tuckeh of your Dwelling house, descending into your Orchard (if it be cleanly condrighed) is good.

The Sunne (in some sort) is the life of the world. It maketh proud growth, and ripens kindly, and speedily, according to the golden tearme: *Annis fructificat, non tellus.* Therefore in the Countries, neerer approaching the *Zodriake*, the Sunnes habitation, they haue better, and sooner ripe fruit, then we that dwell in these frozen parts.

Sunne.

This prouoketh most of our great Arbozists, to plant Apples, cherries, and Peaches, by a wall, and with stakes, and other meanes to spread them vpon, and fasten them to a wall, to haue the benefit of the immoderate refere of the Sun, which is commendable, for the hauing of faire, good, & soone ripe fruit. But let them know it is moze hurtfull to their trees then the benefit they reape thereby can require: as not suffering a Tree to liue the tenth part of his age. It helpes Gardners, to worke, for first the wall hinders the roots, because into a dry and hard wall of earth or stone, a tree will not; nor cannot put any root to profit, but especially it stops the passage of sap, whereby the barke is wounded, and the wood, and diseases grow, so that the tree becomes short of life. For as in the body of a man, the leaning or lying on some member, wherby the course of blood is stopt, makes that member as it were dead for the time, till the blood returns to his course, and I thinke, if that stopping should continue any time, the member would perish for want of blood (for the life is in the blood) and so endanger the body: so the sap is the life of the Tree, as the blood is to mans body: neither doth the tree in winter (as is supposed) want his sap, no moze then mans body his blood, which in winter, & time of sleep drawes inward. So the dead time of winter, to a tree, is but a night of rest: for the tree at all times, euen in winter is nourished with sap, & groweth as well as mans body. The chilling cold may well some little time stay, or hinder the proud course of the sap, but so little & so short a time, that in euery calme & mild season, euen in the depth of winter (if you marke it) you may easily perceiue, the sap to put out, & your trees to increase their buds, which were formed in the Summer before, and may easily then bee discerned: for leaues fall not off, till they be thrust off, with the knots or buds, whereupon it comes to passe, that Trees cannot beare fruit plen-

Trees against a wall.

housio
boug as
moues
blat

plentifully two yeeres together, and make themselves ready to blossome against the seasonableness of the next spring.

And if any frost be so extreme, that it stay the sap too much, or too long, then it kills the forward fruit in the very bud, and sometimes the tender leaues and twigs, but not the tree. Wherefore (to retorne) it is perillous to stop the sap. And where, or when, did you euer see a great tree packt on a wall? Nay, who did euer know a tree so unkindly splat, come to age? I haue heard of some, that out of their imaginary cunning, haue planted such Trees, on the North side of the wall, to auoid drought, but the heat of the Sunne is as comfortable (which they should haue regarded) as the drought is hurtfull. And although water is a soueraigne remedy against drought, yet want of Sun is no way to be helped. Wherefore to conclude this Chapter, let your ground lie so, that it may haue the benefit of the south, and west Sunne, and so low and close, that it may haue moisture, and increase his fatnesse (for trees are the greatest suckers and pillars of earth, and (as much as may be) free from great winds.

CHAP. IIII.

Of the quantitie.



I would bee remembred what a benefit it is, not only to euery particular owner of an Orchard, but also to the common-wealth, by Fruit, as shall be shewed in the 16. chapter (God willing) whereupon must needs follow: the greater the Orchard is (being good and well kept) the better it is, for of good things, being equally good, the biggest is the best. And it shall appeare, that no ground a man occupieth (no, not the Corne-field) yeldeth more gaine to the purse, and house-keeping (not to speake of the unspeakable pleasure) quantity for quantity, than a good Orchard (besides the cost in planting, and dressing an Orchard, is not so much by farre, as the labour and seeding of your Corne-fields, nor for durance of time, comparable, besides the certainty of the one before the other) I see not how any labour, or cost in this kinde, can be idly or wastefully bestowed, or thought too much. And what other thing is it

Wine

Orchard
as good
as a corn
field.

Vineyard (in those Countries where Vines do thrive) than a large Orchard of trees bearing fruit: Or what difference is there in the Juice of the Grape, and our Cyder and Perry, but the goodnesse of the Soile and Climate where they grow: which maketh the one more ripe, and so more pleasant then the other. Whatsoever can be said for the benefit rising from an Orchard, that makes for the largenes of the Orchards bounds. And (me thinks) they doe preposterously, that bestow more cost and labours, and more ground in and vpon a Garden than vpon an Orchard, whence they reape and may reape both more pleasure and more profit, by infinite degrees. And further, that a Garden neuer is fresh, and faire, and well kept, cannot continue without both renewing of the earth, and the herbs often, in the short and ordinary age of a man: whereas your Orchard well kept shall dure diuers hundred yeeres, as shall be shewed chapter 14. In a large Orchard there is much labour saued, in fencing, and otherwise: for three little Orchards, or few trees, being (in a manner) all out-sides, are so blasted and dangered, and commonly in keeping neglected, and require a great fence; whereas in great Orchards, trees are a mutuall defence one to another, and the keeping is regarded, and lesse fencing serues five acres together, than three in severall inclosures.

Now what quantity of ground is meetest for an Orchard can no man prescribe, but that must be left to every mans severall iudgement, to be measured according to his ability and will, for other necessities besides fruit must be had, and some are more delighted with Orchards then others.

Let no man having a fit plot pleade poverty in this case, for an Orchard once planted will maintaine it selfe, and yeeld infinite profit besides. And I am perswaded, that if men did know the right and best way of planting, dressing, and keeping trees, & felt the profit and pleasure thereof, both they that haue no Orchards would haue them, and they that haue Orchards, would haue them larger, yea fruit trees in their hedges, as in Worstershire, &c. And I thinke, that the want of planting, is a great losse to our common-wealth, & in particular, to the owners of Lordships, which Landlords themselves might easily amend, by granting longer terme, and better assurance to their Tenants, who haue taken vp this Proverbe, Botch and sit, Build and sit:

Compared with a Vineyard.

Compared with a garden

What quantity of ground. Want is no hindrance. How Landlords, by their tenants may make flourishing orchards in England.

for who will build, or plant for another mans profit: Or the Parliament might endowne every occupier of grounds, to plant and maintaine for so many acres of fruitfull ground, so many severall trees of kind of trees for fruit. Thus much for quantity.

CHAP. V.

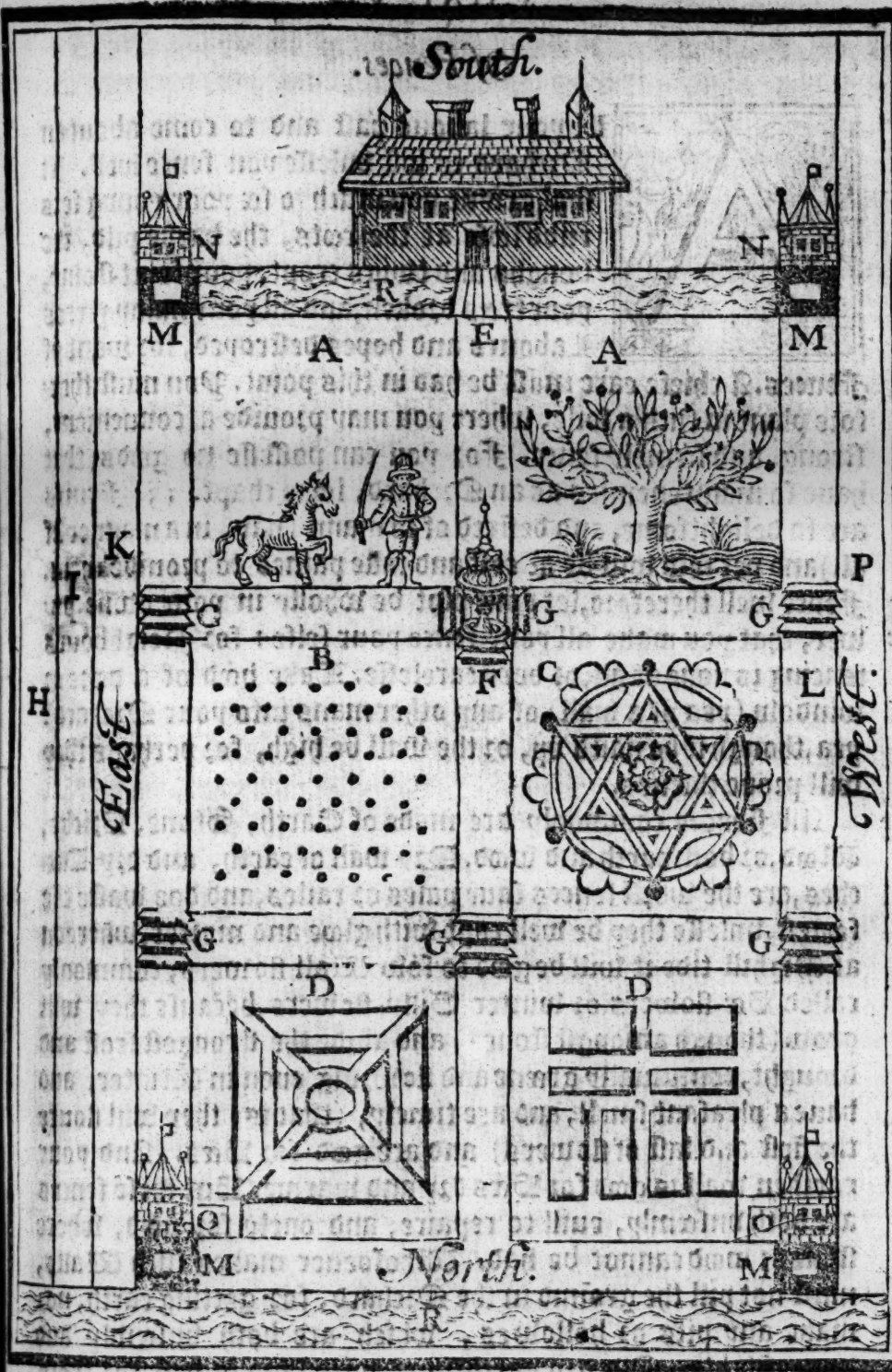
Of the Forme.



The v-
suall
forme is
a square.

The goodnesse of the Soyle, and Site, are necessary to the well being of an Orchard simply, but the forme is so farre necessary, as the owner shall thinke meet, for that kind of forme wherewith every particular man is delighted, we leave it to himselfe, *Summ cuique pulchrum*. The forme that men like in generall is a square, for although roundnesse be *forma perfectissima*, yet that principle is good where necessity by art doth not force some other forme. Now for as much as one principal end of Orchards is recreation by walkes, and universally walkes are straight, it followes that the best forme must be square, as best agreeing with straight walkes: yet if any man be rather delighted with some other forme, or if the ground will not beare a square, I discommend not any forme so it bee fayre. And a square may be drawn out of any forme to make straight walkes, and no forme of it selfe is either good or bad for the trees. If within one large square the Gardener shall make one round labyrinth or Maze with some kind of Berries, it will grate your forme, so there be sufficient room left for walkes, so will foure or more round knots doe. For it is to be noted, that the eye must be pleased with the forme. I have seene squares rising by degrees with staires from your house ward, according to this forme which I have, *Crassa quod alant Minerva*, With an unkeape hand, rough between, for in forming the Country Gardners, the better sort may use better formes, and more costly worke. What is needfull more to be said, I referre that all (concerning the Forme,) to the chapter 17. of the ornaments of an Orchard.

CHAP.



- A. All these square
must bee set with
trees, the Garden
& other ornament
must stand in space
betwixt the trees, &
in the borders and
fences.

- B. Trees 20. yards
asunder.

- C. Garden knot.**

- D. Kitchen garden

- E. Bridge.

- ### F. Conduit.

- G. Staires.

- H. Walkes set with
great wood thicke

- I. Walkes set with
great wood round
about your Or-
chard.

- K. The out fence.

- L. The out fence set
with stone fruit.

- M. Mount. To force
earth for a mount,
or such like, set it
round with quicks,
and lay boughs of
trees strangely in-
termingled, tops
inward with the
earth in the middle

- N. Still-house.

- O. Good standing
for Bees, if you
haue an house.

- P. If the Riuer run
by your doore, and
vnder your mount
it will be pl.asant.

CHAP. VI.

Of Fences.

Effect of
euill fen-
ces.



Let the
fence be
your
owne.

Kinds of
fences.
Earthen
walls.

All your labour past and to come about an Orchard is lost vnlesse you fence well. It shal grieue you much to see your young sets rubb loose at the roots, the barke pild, the boughs and twigs cropt, your fruit stolne, your trees broken, and all your many yeres Labours and hopes destroyed, for want of Fences. A chiefe care must be had in this point. You must therefore plant in such a soile, where you may prouide a conuenient, strong, and seemely fence. For you can possesse no goods, that haue so many enemies as an Orchard, looke chapt. 13. Fruits are so delight some, and desired of so many (nay, in a manner of all) and yet few will be at cost and take paines to prouide them. Fence well therefore, let your plot be wholly in your stone power, that you make all your fence your selfe: for Neighbours fencing is none at all, or very carelesse. Take heed of a doore or window (yea of a wall) of any other mans into your Orchard: yea, though it be naid vp, or the wall be high, for perhaps they will prone theues.

All Fences commonly are made of Earth, Stone, Bricks, Wood, or both earth and wood. Dry wall of earth, and dry Ditches, are the worst fences saue pales or railes, and doe waste the soonest, vnlesse they be well copt with gloe and morter, whereon at Highill-tide it will be good to sow Wall flowers, commonly called Bée-flowers, or winter Silly-flowers, because they will grow (though amongst stones) and abide the strongest frost and drought, continually greene and flowring euen in Winter, and haue a pleasant smell, and are timely, (that is, they will floure the first and last of flowers) and are good for Bees. And your earthen wall is good for Bees dry and warme. But these fences are both vnseemly, euill to repaire, and onely for need, where stone or wood cannot be had. Whosoeuer makes such Walls, must not pill the ground in the Orchard, for getting earth, nor make any pits or hollowes, which are both vnseemly and vnprofitable. Dydry earth mixt with sand is best for these.

This

This kinde of wall will soone decay, by reason of the trees which grow nere it, for the roots and boales of great trees, will increase, vndermine, and ouerthrowe such wals, though they were of stone, as is apparant by Ashes, Rountrées, Burt-trees, and such like, carried in the chat, or berrie, by birds into stone wals.

Fences of Dead-wood, as pales, will not last, neither will railes either last or make good fence.

Pale and
Raile.
Stone
walls.

Stone walls (where stone may be had) are the best of this sort, both for fencing, lasting, and shrouding of your young trees. But about this must you bestow much paines and more cost, to haue them handsome, high and durable.

But of all other (in mine opinion) Quickwood, and Moates or Ditches of Water, where the ground is leuell, is the best fence. In vnequall grounds, which will not keepe water, there a double ditch may be cast, made streight and leuell on the top, two yards broad for a faire walke, five or sixe foot higher then the sayle, with a gutter on either side, two yards wide, and foure foot deepe set without, with three or foure chesse of Thoznes, and within with Cherry, Plumme, Damson, Bullys, Filherds, (for I loue these trees better for their fruit, & as well for their forme, as priuit) for you may make them take any forme. And in enery corner (and middle if you will) a mount would be raised, whereabout the wood may claspe, powdered with wood-binde: which will make with dressing a faire, pleasant, profitable, and sure fence. But you must be sure that your quicke thornes either grow wholly, or that there be a supplie betime, either with planting new, or plashing the old where want is. And assure your selfe, that neither wood, stone, earth, nor water, can make so strong a fence, as this after 7. yeares growth.

Quicke
wood &
Moates.

Moates, Fish-ponde, and (especially at one side a River,) within and without your fence, will affoord you fish, fence, and moysture to your trees, and pleasure also, if they be so great & deepe that you may haue Swans, & other water birds, good for deuouring of vermine, and a boat for many good bles.

Moates.

It shall hardly auaille you to make any fence for your Orchard, if you be a niggard of your fruit. For as liberality will saue it best from noysome neighbours, liberality I say is the best fence, so Justice must restraine rioters. Thus when your ground is tempered, squared, & fenced, it is time to prouide for planting.

CHAP. VII.

Of Sets.



Here is not one point (in my opinion) about an Orchard more to be regarded, than the choice getting and setting of good plants, either for readinesse of hauing good fruit, or for continuall lasting. For whosoever shall faile in the choise of good Sets, or in getting, or gathering, or setting his Plants, shall neuer haue a good or lasting Orchard. And I take want of skill in this facultie to be a chiefe hinderance to the most Orchards, and to many for hauing of Orchards at all.

Some for readinesse vse slips, which seldome take root: and if they doe take, they cannot last, both because their root hauing a maine wound will in short time decay the body of the tree: and besides that rootes being so weakely put, are soone nipt with drought or frost. I could neuer see (lightly) any slip but of Apples onely set for trees.

A bur-knot kindly taken from an Apple tree, is much better and surer. You must cut him close at the root end, an handfull vnder the knot, (Some vse in Summer about *Lammas* to circuncise him, and put earth to the knot with hay roaps, and in winter cut him off and set him, but this is curiosity, needlesse, and danger with remouing, and drought.) and cut away all his twigs saue one, the most principall, which in setting you must leane aboue the earth, burying his trunk in the crust of the earth for his root. It matters not much what part of the bough the twig growes out of. If it grow out of or neere the root end, some say such an Apple will haue no coare nor kinnell. Or if it please the Planter, he may let his bough be crooked, and leane out his top end, one foot or somewhat more, wherein will be good grafting, if either you like not, or doubt the fruit of the bough (for commonly your Bur knots are Summer fruit) or if you thinke he will not, couer his wound safely.

The most vsuall kinde of Sets, is Plants with rootes growing of kinnels of Apples, Peares, and Crabs, or Kones of Cherries, Plummes, &c. removed out of a Nursery, Wood, or other Orchard, into, and set in your Orchard in their due places.

Large
Small
Stone
Apple

Slips.

Bur-
knot.

Vsuall
Sets.

I grant this kinde to be better than either of the former, by much, as more sure and more durable. Herein you must note, that in sets so removed, you get all the rootes you can, and without bzulking of any; I utterly dislike the opinion of those great Gardiners, that following their Bookes would haue the maine rootes cut away, for tops cannot grow without roots. And because none can get all the rootes, and remouall is an hindrance, you may not leane on all tops, when you set them: For there is a proportion betwixt the top and root of a tree, euen in the number (at least) in the growth. If the rootes be many, they will bring you many tops, if they be not hindered. And if you vse to stowe or top your tree too much or too low, and leaue no issue, or little for sap, (as is to be seene in your hedges) it will hinder the growth of roots and boale, because such a kinde of stowing is a kinde of smothering, or choaking the sap. Great wood, as Oake, Elm, Ash, &c. being continually kept downe, with sheeres, knife, axe, &c. neither boale nor root will thriue, but as an hedge or bush. If you intend to graffe in your Set, you may cut him closer with a greater wound, and nearer the earth, with in a foot or two, because the graft or grafts will coeuer his wound. If you like his fruit, and would haue him to be a tree of himselfe, be not so bold: this I can tell you, that though you doe cut his top close, and leaue nothing but his bulke, because his rootes are few, if he be (but little) bigger than your thumbe (as I wish all Plants removed to be) he will safely recover his wound within seuen yeeres; by good guidance that is: If the next time of dressing immediately aboue his uppermost sprig, you cut him off aslope cleagely, so that the sprig stand on the backe side, (and if you can Northward, that the wound may haue the benefit of Sunne) at the upper end of the wound: and let that sprig onely be the boale. And take this for a generall rule; Every young Plant, if he thriue, will recover any wound aboue the earth, by good dressing, although it be to the one halfe, and to his very heart. This short cutting at the remoue, saues your Plants from Winde, and keepe the lesse or no staking. I commend not Lying or Leaning of Trees against Holds or Stayres; for it breeds obstruction of Sappe and wounds incurable. All removing of Trees as great as your arme, or aboue, is dangerous: though some time

Maine
roots cut
Stow
sets re-
moued

Generall
rule.

Tying
of Trees.
Generall
rule.

Signes
of disea-
ses. Cha.
13.

time some such will grow, but not continue long: Because they be tainted with deadly wounds, either in the root or top. (And a tree once thoroughly tainted is neuer good.) And though they get some hold in the earth with some lesser talw, or talwes, which giue some nourishment to the body of the tree: yet the heart being tainted, he will hardly euer thriue; which you may easily discern by the blacknesse of the boughs at the heart, when you dresse your trees. Also, when he is set with more tops than the rootes can nourish, the tops decaying, blacken the boughs, and the boughes the armes, and so the boale at the very heart. Or this taint in the remouall, if it kill not presently, but after some short time, it may be discerned by blacknesse or yelownesse in the barke, and a small hungred leafe. Or if your remoued Plant put forth leaues the next and second Summer, and little or few sprays, it is a great signe of a taint, and next yeares death. I haue knowne a tree tainted in setting, yet grow, and beare blossomes for diuers yeeres: and yet for want of strength could neuer shap his fruit.

Suckers
good
sets.

Pert vnto this, or rather equall with these Plants, are Suckers growing out of the rootes of great Trees, which Cherries & Plummes doe seldome or neuer want: and being taken kindly with their roots, will make very good Sets. And you may helpe them much by enlarging their rootes with the talwes of the tree, whence you take them. They are of two sorts: Either growing from the very root of the tree: and here you must be carefull, not to hurt your tree when you gather them, by ripping amongst the rootes; and that you take them cleane away: for these are a great and continuall annoyance to the growth of your tree: and they will hardly be cleansed. Secondly, or they doe arise from some talw: and these may be taken without danger, with long and good rootes, and will soone become Trees of strength.

A Run-
ning
Plant.

There is another way, which I haue not thoroughly proued, to get not only Plants for grafting, but Sets to remaine for Trees, which I call a Running Plant: the manner of it is this: Take a Rote or kinnell, and put it into the middle of your plot, and the second yeere in the Spring, geld his top, if he haue one principall, (as commonly by nature they haue) and let him put forth only foure Cyons toward the foure corners of the Orchard,

Orchard, as neere the earth as you can. If hee put not foure, (which is rare) stay his top till he haue put so many. When you haue such foure, cut the Stocke aslope, as is aforesaid in this Chapter, hard about the vppermost sprig, and keepe those foure without Cyons cleane and freight, till you haue them a yard and an halfe, at least, or two yards long. When the next spring in grafting time, lay downe those foure spraes, towards the foure corners of your Orchard, with their tops in an heape of pure and good earth, raised as high as the root of your Cyon, (for sap will not descend) and a sod to keepe them downe, leaning nine or twelue inches of the top to looke vpward. In that hill he will put roots, and his top new Cyons, which you must spread as befoze, and so from hill to hill till hee spread the compasse of your ground, or as farre as you list. If in bending, the Cyons cracke, the matter is small, cleanse the ground and hee will reouer. Euery bended bough will put forth branches, and become Trees. If this Plant be of a burre knot, there is no doubt. I haue proued it in one Branch my selfe: and I know at Wilton in Cleue-land a Beare-tree of a great bulke and age, blowne close to the earth, hath put at euery knot rootes into the earth, and from root to top, a great number of mighty armes or trees, filling a great roomth, like many trees, or a little Orchard. Much better may it be done by Art in a lesse Tree. And I could not mislike this kinde, saue that the time will be long befoze it come to perfection.

Many vse to buy Sets already grafted, which is not the best way: for first, All remoues are dangerous: Againe, there is danger in the carriage: Thirdly, it is a costly course of Planting: Fourthly, euery Gardiner is not trusty to sell you good fruit: Fifthly, you know not which is best, which is worst, and so may take most care about your worst trees. Lastly, this way keepes you from practise, and so from experience, in so good, Gentlemanly, Scholerlike, and profitable a Faculty.

The onely best way (in my opinion) to haue sure and lasting Sets, is neuer to remoue: for euery remoue is an hinderance, if not a dangerous hurt or deadly teint. This is the way: The Plot-forme being laid, and the Plot appointed where you will plant euery Set in your Orchard, dig the roomth, where your Sets shall stand, a yard compasse,

Sets bought.

The best Sets.

Vnremoued how.

and make the earth mellow and cleane, and mingle it with a few coale ashes, to auoid Wormes: and immediatly after the first change of the Moone, in the latter end of February, the earth being a fresh turned ouer, put in euery such roomth three or foure Kirnells of Apples or Peares, of the best: euery Kirnell in an hole made with your finger, finger-deepe, a foot distant one from another: and that day Moneth following, as many moe, (lest some of the former misse) in the same compasse; but not in the same holes. Hence (God willing) shall you haue rootes enough. If they all, or diuers of them come vp, you may draw (but not dig) vp (nor put downe) at your pleasure, the next Nouember. How many soeuer you take away, to giue or bestow elsewhere, be sure to leaue two of the proudest. And when in your second and third yeere you Graffe (if you Graffe then at all) leaue the one of those two vngrafted, lest in grafting the other you faile: For I finde by tryall, that after first or second grafting in the same Stocke, being mist (soz who hits all) the third misse puts your Stocke in deadly danger, for want of issue of sap. Mea, though you hit in grafting, yet may your graffes with Winde or otherwise bee broken downe. If your graffes or graffe prosper, you haue your desire, in a Plant vnremoued, without taint, and the fruit at your owne choise, and so you may (some little earth being remoued) pull, but not digge vp the other Plant or Plants in that roomth. If your graffe or Stocke, or both perish, you haue another in the same place, of better strength to worke vpon. For thriving without snub hee will ouerlay your grafted Stocke much. And it is hardly possible to misse in grafting so often, if your Gardiner be worzh his name.

Sets vn-
grafted
best of
all.

finde

win

down

wood

It shall not bee amisse (as I iudge it) if your Kirnells be of choise fruit, and that you see them come forward prouedly in their body, and beare a faire and broad lease in colour, tending to a greenish yelloe (which argues pleasant and great fruit) to try some of them vngrafted: for although it be a long time ere this come to beare fruit, ten or twelue yeeres, or moe; and at their first bearing, the fruit will not seeme to bee like his owne kinde: yet am I assured, vpon tryall, befoze twenty yeeres growth, such Trees will increase the bignesse and goodnesse of their fruit, and come perfectly to their owne kinde.

Trees

Trees (like other breeding creatures) as they grow in yeeres, hignes, and strength, so they mend their fruit. Husbands and Huswives finde this true by experience, in the rearing of their young Store. More then this, there is no tree like this for soundnesse & durable last, if his keeping and dressing be answerable. I grant, the readiest way to come sone to fruit is grafting: because in a manner, all your Graftes are taken off fruit-bearing Trees.

Now when you have made choise of your Sets to remoue, the ground being ready, the best time is, immediatly after the fall of the Lease, in, or about the change of the Moone, when the sap is most quiet: for then the sap is in turning: for it makes no stay, but in the extremity of drought or cold. At any time in winter, may you transplant trees, so you put no Ice nor Snow to the roote of your Plant in the setting: and therefore open, calme, and moist weather is best. To remoue, the lease being ready to fall, and not fallen, or buds apparantly put forth in a moist, warme season, for need, sometime may doe well: but the safest is to walke in the plaine trodden path.

Time of remouing.

Generall rule.

Some hold opinion that it is best remouing before the fall of the lease, and I heare it commonly so practised in the South by our best Arborists, the lease not fallen: & they giue the reason to be, that the descending of the sap will make speedy roots. But marke the reasons following, and I thinke you shall find no soundnes, either in that positio or practise, at least in the reason.

1. I say, it is dangerous to remoue when the sap is not quiet, for every remoue giues a main checke to the rising sap, by staying the course thereof in the body of your plant, as may appeare in trees remoued any time in Summer, they commonly die, nay hardly shall you saue the life of the most young and tender plant of any kind of wood (scarcely herbes) if you remoue them in the pride of sap. For proud sap vniuersally stayed, by remouall, ever hinders, often taints, and so presently, or in very short time kills. Sap is like blood in mans body, in which is the life, Cap. 3. pag. 8. If the blood vniuersally be cold, life is excluded; so is sap tainted by vntimely remouall. A stay by drought, or cold, is not so dangerous (the dangerous if it be extreme) because more naturall.

2. The sap neuer descends, as men suppose, but is consolidated and transubstantiated into the substance of the tree, and

passeth (alwayes aboue the earth) bpward, not only betwixt the barke and the wood, but also into & in both body and barke, tho not so plentifully, as may appeare by a tree budding, may thus lying 2. or 3. yeeres, after he be circumcised, at the very root, like a Riner that enlargeth his chanell by a continuall descent. 3. I cannot perceiue what time they wold haue & sap to descend. At midsummer in a biting drought it waies, but descends not, for immediately upon moisture it makes second shoots, at (or before rather) Michaeltide, when it shapens his buds for next yeeres fruit. If at the fall of the leafe, I grant, about that time is & greatest stand (but not descent) of sap, which begins somewhat before the leafe fall, but not long, & therefore at that time must needs be the best remouing, not by reason of the descent, but stay of sap.

4. The sap in his course hath his profitable and apparent effects, as the growth of the Tree, couering of wounds, putting of buds, &c. Whereupon it follows, if the sap descend, it must needs haue some effect to the w. it.

5. Lastly, boughs plasht and laid lower than the root, die for want of sap descending, except where it is forced by the maine stream of the sap, as in top boughs hanging like water in pipes, or except the plasht bough lying on the ground put roots of his owne, yea under boughs which wee commonly call water-boughs, can scarcely get sap to line, yea in time dye, because the sap doth presse so violently bpward, and therefore the fairest shoots and fruit are alwayes in the top.

Object. If you say that many so remoued thriue, I say that somewhat before the fall of the leafe (but not much) is the stand, for the fall and the stand are not at one instant, before the stand is dangerous. But to returne.

Remoue
soone.

The sooner in Winter you remoue your sets, the better; the latter the worse: for it is very perillous if a strong drought take your sets before they haue made good their rooting. A plant set at the Fall, shall gaine (in a manner) a whole yeeres growth of that which is set in the Spring after.

The
manner
of set-
ting.

I vse in the setting to bee sure, that the earth bee moulty, (and somewhat moist) that it may runne among the small tangles without straining or bruising: and as I fill in earth to his root, I shake the set easily to and fro, to make the earth settle the better to his roots: and withall easily with my

my foot I put in the earth close; for ayre is noysome, and will follow concavities. Some prescribe Dates to be put in with the earth. I could like it, if I could know any reason thereof: and they vse to set their plant with the same side toward the Sun: but this conceit is like the other. For first I would haue euery tree to stand so free from shade, that not onely the root (which therefore you must keepe bare from grasse) but body, boughes, and branches, and euery spray, may haue the benefit of Sun. And what hurt, if that part of the tree, that before was shadowed, be now made partaker of the heat of the Sun? In turning of Bees, I know it is hurtfull, because it change th their entrance, passage, and whole worke: but not so in Trees.

Set as deepe as you can, so that in any winter you may not be weary the crust. Look Chap. 2.

The spake in the second Chapter of moisture in generall: but now especially hauing put your remoued plant into the earth, potize on water (of a piddle were good) by distilling presently, and so euery weeke twice in strong drought, so long as the earth will drinke, & refuse by overdrinking. For moisture mollifies, & both giues leaue to the roots to spread, & makes the earth yeld sap and nourishment, with plentie & facilitie. Hurtes (they say) giue most and best milke after warme drinke. If your ground be such that it will keepe no moisture at the root of your plant, such plant shall neuer like, or but for a time. There is nothing more hurtfull for young trees than piercing drought. I haue knowne trees of good stature after they haue bene of diuers yeares growth, and throue well for a good time, perish for want of water, and hereafter by reason of faints in letting.

It is meet your sets and grafts be fenced, till they be as big as your arme, for feare of annoyances. Many waies may sets receiue damages, after they be set, whether they be grafted or ingrafted. For, although we suppose, that no noysome beast, or other thing must haue accesse among your trees: yet by casualtie, a Dog, Cat, or such like, or your selfe, or negligent friend bearing you company, or a shrewd boy, may tread or fall vpon a young and tender plant or graft. To auoyd these and many such chances, you must stake them round a prettie distance from the set, neither so neere, nor so thicke, but that it may haue the benefit of Sunne, raine, and aire.

Set in
the crust.
Moyster
good.

Grafts
must be
fenced.

Your stakes (small or great) would beste surely put, or driuen into the earth, that they breake not, if any thing happen to leane vpon them, else may the fall be more hurtfull, than the want of the fence. Let not your stakes fester any weeds about your sets, for want of Sunne is a great hinderance. Let them stand so far off, that your grafts spreading receiue no hurt, either by rubbing on them, or of any other thing passing by. If your stocke be long, and high grafted (which I much discommend (except in need) because there the sap is weake, and they are subiect to strong winds, and the lighting of birds) tie easily with a soft list three or foure patches vnder the clay, and let their tops stand aboue the grafts, to auoid the lighting of Crowses, Wyces, &c. vpon your grafts. If you take some sharpe thornes at the roots of your stakes, they will make hurtfull things keepe off the better. Other better fences for your grafts I know none. And thus shall you set and setting.

CHAP. VIII. Of the distance of Trees.



Hurts of
tooneere
planting.

Now not to what end you should provide good ground, well fenced, & plant good trees, & when your trees should come to profit, vnder all your labours lost, for want of due regard to the distance of placing of your trees. I haue seene many trees stand so thicke, that one could not thine to the thynning of his Neigh-
bours. If you doe marke it, you shall see the tops of trees rubb off, their sides galled like a galled horses backe, and many trees haue more stumps than boughs, and most trees no well thynning, but short, stumpy, & euill thynning boughs: like a Come-field over-seeded, or a towne over-peopled, or a pasture ouer-laid, which the Cardiner must either let grow, or leane the tree very few boughs to beare fruit. Hence small thistle, galls, wounds, diseases, and short life to the trees: and while they line Greene, little, hard, worme-eaten, and euill thynning fruit arise, to the discomfort of the owners.

Remedy.

To prevent which discomforts, one of the best remedies is, the sufficient & fit distance of trees. Wherefore at the setting of your plants you must haue such a respect, that the distance of them

them be such, that every tree be not annoyance, but an helpe to his fellowes: for trees (as all other things of the same kinde) should shrowd, and not hurt one another. And assure your selfe, that every touch of trees (as well under as above the earth) is hurtful. Therefore this must be a generall rule in this Art: That no tree in an Orchard well ordered, nor bough, nor Cyon, drop upon, or touch his fellowes. Let no man thinke this impossible, but looke in the eleventh chapter of dressing of trees. If they touch, the winde will cause a terrible rub. Young twigs are tender, if boughs or armes touch and rub, if they are strong, they make great galls. No kinde of touch therefore in trees can be good.

Now it is to be considered what distance amongst sets is requisite, and that must be gathered from the compasse and rooth, that each tree by probability will take and fill. And herein I am of a contrary opinion to all them, which practise or teach the planting of trees, that ever yet I knew, read, or heard of. For the common space betwixens tree and tree is ten foot, if twenty foot, it is thought very much. But I suppose twenty yards distance is small enough betwixt tree and tree, or rather too little. For the distance must needs be as far as two trees are well able to overspread, and fill, so they touch not, by one yard at least. Now I am assured, and I know one Apple tree, set of a slip *superfluous* in the space of twenty yeares, (which I count a very small part of a trees age, as is shewed Chapter 14) hath spread his boughs eleven or twelve yards compasse, that is, five or six yards on every side. Hence I gather, that in forty or fiftie yeares (which yet is but a small time of his age) a tree in good soile, well liking, by good dressing (so that is much available to this purpose) will spread double at the least, viz. twelve yards on a side, which being added to twelve allotted to his fellow, make twenty and foure yards, and so farre distant must every tree stand from another. And looke how farre a tree spreads his boughs above, so far doth he put his roots vnder the earth, or rather further, if there be no stop, nor let by walls, trees, rocks, barren earth, and such like: for an huge bulk, and strong armes, massive boughs, many branches, and infinite twigs, require wide-spreading rootes. The top hath the vast aire to spread his boughs in, high and low, this way and that way: but the roots are kept in the crust of the earth, they may not goe downeward, nor

Generall rule.
All touches hurt full.

The best distance of trees.

Parts of a tree.

upward

upward out of the earth, which is their element, no more than the Fish out of the Water, Camelion out of the Aire, nor Salamander out of the Fire. Therefore they must needs spread far vnder the earth. And I dare well say, if nature would give leaue to man by Art, to dresse the roots of trees, to take away the tawes, and tangles, that lay and fret and grow superfluously and disorderly, (for euery thing *sublunary* is cursed for mans sake) the tops aboue being answerably dresse, we should haue trees of wonderfull greatnesse, and infinite durance. And I perswade my selfe that this might be done sometimes in Winter, to trees standing in faire plaines and kindly earth, with small or no danger at all. So that I conclude, that twenty foure yards are the least space that Art can allot for trees to stand distant one from another.

Waste
ground
in an or-
chard.

If you aske me what vse shall be made of that waste ground betwixt tree and tree: I answer: If you please to plant some tree or trees in that middle space, you may, and as your trees grow contiguous, great and thicke, you may at your pleasure take vp those last trees. And this I take to be the chiefe cause, why the most trees stand so thicke. For men not knowing (or not regarding) this secret of needfull distance, and louing fruit of trees planted to their hands, thinke much to pull vp any, though they pine one another. If you or your heires or successors would take vp some great trees (past setting) where they stand too thicke, be sure you doe it about midsummer, and leaue no maine rootes. I destinate this space of foure and twenty yards, for trees of age and stature. More than this, you haue borders to be made for walkes, with Roses, Berries &c.

And chiefly consider: that your Orchard, for the first twenty or thirtie yeeres, will serue you for many Gardens, for Astron, Licorises, roots, and other herbes for profit, and flowers for pleasure: so that no ground need be wasted if the Gardiner be skillfull and diligent. But be sure you come not nere with such deepe deluing the rootes of your trees, whose compasse you may partly discern, by the compasse of the tops, if your top be well spread. And vnder the droppings and shadow of your trees, be sure no herbes will like. Let this be said for the distance of Trees.

CHAP. IX.

Of the Placing of Trees.

The placing of Trees in an Orchard is well worth the regard: For although it must be granted, that any of our foresaid Trees (chap. 2.) will like well in any part of your Orchard, being good and well dressed earth: yet are not all Trees alike worthy of a good place. And therefore I wish that your Filberd, Plummes, Damsons, Buleste, and such like, be utterly removed from the plaine soile of your Orchard into your fence: for there is not such fertility and easfull growth, as within: and there also they are more subiect, and can better abide the blasts of Æolus. The Cheries and Plummes being ripe in the hot time of Summer, and the rest standing longer, are not so sone shaken as your better fruit: neither if they suffer losse, is your losse so great. Besides that, your fences and ditches will deuoure some of your fruit growing in so nere your hedges. And seeing the continuance of all these (except Puts) is small, the care of them ought to be the lesse. And make no doubt, but the fences of a large Orchard will containe a sufficient number of such kind of Fruit-trees in the whole compasse. It is not materiall, but at your pleasure, in the said fences, you may either interminge your seuerall kinds of fruit-trees, or set euery kind by himselfe, which order doth very wel become your better and greater fruit. Let therefore your Apples, Peares, and Quinches, possesse the soile of your Orchard, vnlesse you be especially affected to some of your other kinds: and of them let your greatest Trees of growth stand furthest from Sunne, and your Quinches at the South side or end, and your Apples in the middle, so shall none be any hindzance to his fellowes. The Warden-tree, and winter Peare will challenge the preheminance for stature. Of your Apple-trees you shall finde difference in growth. A good Pippin will grow large, and a Costard tree: stead them on the North side of your other Apples, thus being placed, the least will giue Sun to the rest, and the greatest will shroud their fellowes. The fences and out-trees will guard all.



CHAP. X.

Of Grafting.

Of gra-
uing or
caruing.

Grafting
what,



A Grafte

Kinds of
grafting.

Now are we come to the most curious point of our faculty: curious in conceit, but indeed as plaine and easie as the rest, when it is plainly shewne, which we commonly call Grafting, or (after some) Graffing. I cannot Etymologize, nor shew the originall of the word, except it come of graping and caruing. But the thing or matter is: The reforming of the fruit of one Tree with the fruit of another, by an artificiall transplacing or transposing of a twig, bud or leafe, (commonly called a Graft) taken from one tree of the same, or some other kind, and placed or put to, or into another tree in due time and manner.

Of this there be diuers kinds, but three or foure now especially to wit, Grafting, incising, packing on, grafting in the scutchion, or inoculating: whereof the chiefe and most vsuall, is called grafting (by the generall name, *Cataphorism*.) for it is the most knowne, surest, readiest, and plainest way to haue store of good fruit.

It is thus wrought : You must with a fine, thin, strong, and sharpe Saw, made and armed for that purpose, cut off a foot about the ground, or thereabouts, in a plaine without a knot, or as nere as you can without a knot (for some Stocks will be knotty) your Stocke, let or plant, being surely stayed with your foot and legge, or otherwise streight overthwart (for the Stocke may bee crooked) and then plaine his wound smoothly with a sharpe knife : that done, cleaue him cleanly in the middle with a cleauer, and a knocke or mall, and with a wedge of wood, Iron or Bone, two handfull long at least, put into the middle of that cleft, with the same knocke, make the wound gape a straw bredth wide, into which you must put your Graffes.

Graft
how.

The graft is a top twigge taken from some other Tree (for it is folly to put a graffe into his owne Stocke) beneath the uppermost (and sometime in need the second) knot, and with a sharpe knife fitted in the knot (and sometime out of the knot when neede is) with shoulders an ynch downward, and so put into the stock with some thrusting (but not straining) barke to barke inward.

A Graft
what.

Let your graffe haue three or foure eyes, for readinesse to put forth, and giue issue to the sap. It is not amisse to cut off the top of your graffe, and leaue it but five or six inches long, because commonly you shall see the tops of long graffes die. The reason is this. The sap in grafting receiues a rebuke, and cannot worke so strongly presently, and your graffes receiue not sap so readily, as the naturall branches. When your graffes are cleanly and closely put in, and your wedge puld out nimbly; for feare of putting your graffes out of frame, take well tempered mortar, soundly wrought with chaffe or horse dung (for the dung of cattell will grow hard, and straine your graffes) the quantity of a Gols egg, and diuide it iust, and therewithall, couer your stocke, laying the one halfe on the one side, and the other halfe on the other side of your graffes (for thrusting against your graffes) you moue them, and let both your hands thrust at once, and alike, & let your clay be tender, to yeld easily; and all, lest you moue your graffes. Some vse to couer the cleft of the Stocke, vnder the clay with a peece of barke or leafe, some with a fear-cloth of waxe and butter, which as they be not much need,

Eyes.

Generall
Rule.

fall, so they hurt not, vntlesse that by being busse about them, you moue your grasses from their places. They vse also mosse tyed on aboue the clay with some byer, wicker, or other bands. These profit nothing. They all put the grasses in danger, with pulling and thrusting: for I hold this generall rule in grafting, and planting: if your stocke and grasses take, and thriue (for some will take, and not thriue, being tainted by some meanes in the planting or grafting) they will (without doubt) recouer their wounds safely and shortly.

Time of
grafting.

The best time of grafting from the time of remouing your stocke is the next Spring, for that saues a second wound, and a second repulse of sap, if your stocke bee of sufficient bignesse to take a grasse from as big as your thumbe, to as big as an arme of a man. You may grasse lesse (which I like) and bigger, which I like not so well. The best time of the yeere is in the last part of February, or in March, or beginning of Aprill, when the Sunne with his heat beginnes to make the sap stirre more rankely, about the change of Maye before you see any great apparancy of lease or flowers, but onely knots and buds, and before they be proud, though it be sooner. Cherries, Peares, Appricocks, Quinces and Plummies would be gathered and grafted sooner.

Gathe-
ring
grasses.

The grasses may be gathered sooner in February, or any time within a moneth, or two before you grasse, or vpon the same day (which I commend) If you get them any time before, for I haue knowne grasses gathered in December, and doe well, take heed of drought. I haue my selfe taken a bur knot of a tree, and the same day when he was laid in the earth about mid February, gathered grafts and put in him, and one of those grasses bore the third yeere after, and the fourth plentifully. Grasses of old Trees would be gathered sooner than of young trees, for they sooner breake and bud. If you keepe grasses in the earth, moisture with the heat of the Sunne will make them sprout as fast, as if they were growing on the tree. And therefore seeing keeping is dangerous, the surest way (as I iudge) is to take them within a weeke of the time of your grafting.

Grasses
of old
trees.

The grafts would be taken not of the proudest twigs, for it may be your stocke is not answerable in strength. And therefore (say I) the grafts brought from South to be in the North, although

although they take and thrive (which is somewhat doubtfull, Where
by reason of the difference of the Climate and carriage) yet shall taken.
they in time fashion themselves to our cold Northerne Soyle,
in growth, taste, &c. For of the poorest, for want of strength
may make them unreadie to receive sap (and who can tell
but a poore graft is tainted) nor on the outside of your tree,
for there should your tree spread but in the middlest: for
there you may be sure your Tree is no whit hindered in
his growth or forme. Hee will still recover inward, more than
you would wish. If your clay clift in summer with drought,
looke well in the Chinkes for Emmites and Carewigs, for they
are cunning and close thieves, about grafts you shall finde
them stirring in the morning or evening, and the rather in
moist weather. I haue had many young buds of Grasses, euen
in the flourishing, eaten with Ants. Let this suffice for graf-
sing, which is in the faculty counted the chiefe secret, and be-
cause it is most vsuall, it is best knowne.

Emmites.

Grasses are not to be disliked for growth, till they wi-
ther, pine, and die. Usually before Midsummer they breake,
if they liue. Some (but few) keeping proud and greene,
will not put till the second yeare, so is it to be thought
of sets.

The first shew of putting is no sure signe of growth it is but
the sap the grasse brought with him from his tree.

So soone as you see the graft put for growth, take away the
clay, for then doth neither the stocke nor the grasse need it
(put a little fresh well-tempered clay in the hole of the stocke)
for the clay is now tender, and rather keepes moisture than
drought.

The other waies of changing the naturall fruit of Trees, are
more curious than profitable, and therefore I minde not to be-
stow much labour or time about them, onely I shall make
knowne what I haue proued, and what I doe thinke.

And first of incising, which is the cutting of the backe of the
boale, a rine or branch of a tree at some bending or knæ, shoul-
derwise with two gashes, onely with a sharpe knife to the
wood: then take a wedge, the bignesse of your grasse sharpe en-
ded, flat on the one side, agreeing with the tree, and round on the
other side, and with that being thrust in, raise your barke,

Incising.

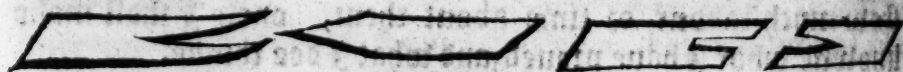
A great
stocke.

then put in your grasse, fashioned like your wedge iust: and lastly couer your wound, and fast it bp, and take heed of straining. This will grow but to small purpose, for it is weak hold, and lightly it will be vnder growth. Thus may you graft betwixt the barke and the tree of a great stocke that will not easily bee clifted: But I haue tried a better way for great trees, viz. First, cut him off straight, and cleanse him with your knife, then cleane him into foure quarters, equally with a strong cleauer: then take for euery Clift two or thre small (but hard) wedges iust of the bignesse of your grafts, and with those Wedges driuen in with an hammer open the foure clifts so wide (but no wider) that they may take your foure grasses, with thrusting, not with straining: and lastly couer and clay it closely, and this is a sure and good way of grafting: or thus, clift your stocke by his edges twice or thrice with your cleauer, and open him with your wedge in euery clift one by one, and put in your grafts, and then couer them. This may doe well.

Packing
thus.

Packing on is, when you cut aslope a twig of the same bignesse with your graft, either in or besides the knot, two inches long, and make your graft agree iumpe with the Cyon, and gash your graft and your Cyon in the middell of the wound, lengthway, a straw breadth deepe, and thrust the one into the other, wound to wound, sap to sap, barke to barke, then tie them close and clay them. This may doe well. The fairest graft I haue in my little Orchard, which I haue planted, is thus packt on, and the branch whereon I put him, is his plentifull roote.

To be short in this point, cut your graft in any sort or fashion, two inches long, and lopne him cleanly and close to any other sprig of any tree in the latter end of the time of grafting, when sap is somewhat rise, and in all probabilitie they will close and thriue: thus



The sprig.

The graft.

The twig.

The graft.

Inocula-
ting.

Or any other fashion you thinke good.

Inoculating is an eye or bud, taken barke and all from one tree, and placed in the roome of another eye or bud of another, cut both of one compasse, and there bound. This must be done in Summer, when the sap is proud.

much

Such like unto this is that, they call grafting in the scutchion. They differ thus: That here you must take an eie with his leafe, or (in mine opinion) a bud with his leanes. (Note that an eie is for a Cyon, a budde is for flowers and fruit.) and place them on another tree, in a plaine (for so they teach) the place or barke where you must set it must be thus cut with a sharpe knife, and the barke raised with a wedge, and then the

Hie or budde put in and so bound vp. I cannot denie but such may grow. And your bud if he take wil flower and beare fruit that yeare: as some grafts and sets also, being set for bloomes. If these two kindes thriue, they refoyme but a spray, and an undergrowth. Thus you may place Roses on Thornes, and Cherries on Apples, and such like. Many write much more of grafting, but to small purpose. Whom we leane to themselves, and their followers; and ending this secret we come in the next Chapter to a point of knowledge most requisite in an Arbozist, as well for all other woods as for an Orchard.

Grafting
in the
Scutchi-
on

CHAP. XI.

Of the right dressing of Trees.

If all these things aforesaid were indeed performed, as wee haue shewed them in wordes, you should haue a perfect Orchard in nature and substance, begunne to your hand: And yet are all these things nothing, if you want that skill to dresse and keepe your trees. Such is the condition of all earthly things, whereby a man receiueth profit or pleasure, that they degenerate presently without good ordering. Man himselfe left to himselfe, growes from his heavenly & spirituall generation, and becommeth beastly, yea deuillish to his owne kind, vnlesse he be regenerate. No maruell then, if Trees make their shootes, and put their sprays disorderly. And truly (if I were worthy to iudge) there is not a mischiefe

Necessi-
ty of
dressing
trees.

Generall
rule.

chiefe that breedeth greater and more generall harme to all the Orchard (especially if they be of any continuance) that ever I saw, (I will not except three) than the want of the skillfull dressing of trees. It is a common and unskillfull opinion, and saying, Let all grow, and they will beare more fruit: and if you lop away superfluous boughes, they say, what a pittie is this: How many apples would these have borne: not considering there may arise hurt to your Orchard, as well (nay rather) by abundance, as by want of wood. A sound and thriving plant in a good soyle, will ever yeeld too much wood, and disorderly, but never too little. So that a skillfull and painfull Arbozist, need never want matter to effect a plentiful and well dressed Orchard: for it is an easie matter to take away superfluous boughes (if your Gardener have skill to know them) where of your plants will yeeld abundance, and skill will leave sufficient well ordered. All ages both by rules and experience doe consent to a pruning and lopping of trees: yet have not any that I know described unto vs (except in darke and generall words) what or which are those superfluous boughes, which we must take away, and that is the chiefe and most needfull point to be knowne in lopping. And we may well assure our selves, (as in all other Arts, so in this) there is a vantage and dexterity, by skill, and an habit by practise out of experience, in the performance hereof for the profit of mankind; yet doe I not know (let me speake it with the patience of our cunning Arbozists) any thing within the compasse of humane affaires so necessary, and so little regarded, not only in Orchards, but also in all other timber trees, where or whatsoever.

Timber
wood e-
will dress.

How many forests and woods: wherein you shall have for one lively thriving tree, foure (nay sometimes 24.) evill thriving, rotten and dying trees, even while they live. And instead of trees thousands of bushes and shrubbes. What rottenesse: what hollownesse: what dead armes: withered tops: curttailed trunkes: what loades of mosses: drooping boughes: and dying branches shall you see every where: And those that like in this sort are in a manner all unprofitable boughes, canked armes, crooked, little and short boales: what an infinite number of bushes, shrubs, and skrogs of hazels, thornes, and other profitable wood, which might be brought

brought by Dressing

to become great and goodly

Trees. Consider now the cause:

The lesser wood

hath beene spoiled

led with care,

lesse, unskillfull,

and continually

flowing, and

much also of the

great wood

greater of Trees

at the first

sing have filled

and over-loaden

themselves with

a number of

unskillfull boughs

and suckers,

which have not

only drawne the

sap from the

bole, but also

have made it

knottie, and

themselves and

the bole more

for want of dressing,

whereas if in the prime of growth they

had beene taken away close, all but one top (according to this

patterne) and cleane by the bulke, the strength of all the

sap should have gone to the bulke, and so he would have recou-

tered and covered his knots, and have put forth a faire, long

and streight body (as you see) for timber profitable, huge great of

bulke, and of infinite last.

If all timber Trees were such (will some say) how should

we have crowded wood for wharves, masts, &c.



The
cause of
hurts in
wood.

Imagine the root to be spread farre wider.

Dresse
timber
trees
how.

Ans. Dresse all you can, and there will be enough crooked for those bles.

More than this, in most places, they grow so thicke, that neither themselves, nor earth, nor any thing vnder or nere them can thine, nor sunne, nor raine, nor aire can do them, nor any thing nere or vnder them any profit or comfort.

I see a number of Hags, where out of one roote you shall see three or foure, (nay more) such as mens vnskillfull greedynesse, who desiring many haue none good) pritty Dakes or Ashes, straight and tall, because the root at the first shot giues Sap amaine: but if one only of them might be suffered to grow, and that well and cleanly pruned, all to his very top, what a Tree should wee haue in time? And wee see by these roots continually and plentifully springing, notwithstanding so deadly wounded. What a commodity should arise to the owner, and the common wealth, if wood were cherished, and orderly dressed.

Profit of
trees
dressed.

The waste boughs closely and skilfully taken away, would giue vs store of fences and setwell, and the bulke of the tree in time would grow of huge length and bignesse. But here (me thinks) I heare an vnskillfull Arbozist say, that trees haue their senerall formes, euen by nature, the Pearre, the Holly, the Aspe, &c. grow long in bulke with few and little armes. The Oke by nature broad and such like. All this I grant: but grant me also, that there is a profitable end, and vse of every tree, from which if it decline (tho by nature) yet man by art may (nay must) correct it. Now other end of Trees I neuer could learne, than good timber, fruit much and good, and pleasure. Vses physickall hindernothing a good forme.

The end
of trees.

Trees
will take
any
forme.

Neither let any man euer so much as thinke, that it is vnprobable, much lesse impossible, to reforme any tree of what kinde soeuer. For (beleeue me) I haue tried it, I can bring any tree (beginning by time) to any forme. The Pearre and Holly may be made to spread, and the Oke to close.

But why doe I wander out of the compasse of mine Orchard into the Forrests and woods? Neither yet am I from my purpose, if boales of timber trees stand in need of all the sap, to make them great and straight (for strong growth and dressing make strong trees) then it must needs be profitable for fruit (a thing

thing more immediately serving a mans need) to haue all the sap The end
his root can yeeld: for as timber sound, great and long, is the of trees.
good of timber trees, and therefore they beare no fruit of worth:
so fruit, good, sound, pleasant, great and much, is the end of
fruitfull trees. That Gardener therefore shall perforce his duty
skilfully and faithfully, which shall so dresse his Trees, that
they may beare such and such store of fruit, which he shall neuer
doe (I dare undertake) vntlesse he keepe this order in dressing
his Trees.

A fruit Tree so standing, that there need none other end of How to
dressing but fruit (not ornaments for walkes, nor delight to dresse a
such as would please their eye only, and yet the best forme can, fruit tree
not but both adorne & delight) must be parted from within two
fot (or thereabouts) of the earth, so high to giue liberty to dresse
his root, and no higher, for drinking vp the sap that should feede
his fruit, for the boale will be first, and best serued and fed, be-
cause he is next the root, and of greatest ware and substance, and
that makes him longest of life, into two, three, or foure armes,
as your stocke or grasses yeeld twigs, and euery arme into two
or more branches, and euery branch into his seuerall Cyons,
still spreading by equall degrees, so that his lowest spray be hard-
ly without the reach of a mans hand; and his highest be not past
2. yards higher, rarely (especially in the middest) that no one
twig touch his fellow. Let him spread as far as he list without
any master-bough, or top equally. And when any bough doth
grow sadder and fall lower, than his fellowes (as they will
with weight of fruit) ease him the next spring of his superfluous
twigs, and he will rise: when any bough or spray shall amount
aboue the rest; either snub his top with a nip betwixt your fin-
ger and your thumbe, or with a sharpe knife, and take him cleane
away, and so you may vse any Cyon you would reforme, and as
your tree shall grow in stature and strength, so let him rise with
his tops, but slowly, and early, especially in the middest, and
equally, and in bredth also, and follow him vpward with lop-
ping his vnder growth and water-boughs, keeping the same
distance of two yards, but not aboue three in any wise, betwixt
the lowest and highest twigs.

1 Thus shall you haue well liking, cleane skind, healthfull,
great, and long-lasting trees.

¶ 2

2 Thus

Benefits
of good
dressing

Thus shall your Tree grow low, and safe from winds, for his top will be great, broad and weighty.

Thus growing low, shall your trees beare much fruit (I dare say) one as much as five of your common trees, and good without shadowing, dropping, and fretting: for his boughs, branches, and twigs shall be many, and those are they (not the boate) which beare the fruit.

Thus shall your boale being little (not small but low) by reason of his shortnesse, take little, and yeld much sap to the fruit.

Thus your Trees by reason of strength in time of setting shall put forth more blossomes, and more fruit, being free from faults; for strength is a great helpe to bring forth much and safely, whereas weaknesse failes in setting though the season be calme.

Some vse to have Trees roots in winter, to stay the setting till hotter seasons, which I discommend, because,

They have the roots.

It takes it nothing at all.

Though it did, being but small, with vs in the North, they have their part of our Aprill and Maies frosts.

Thus shall your trees beare more fruit in the setting.

They shall be fully labour.

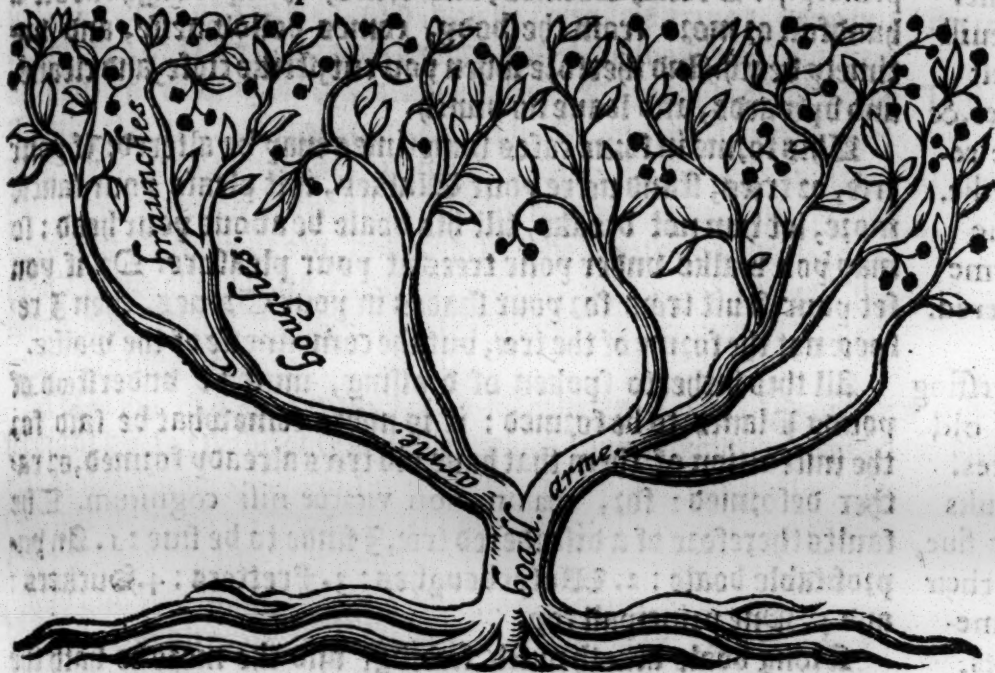
Thus shall your tree be easie to dresse, and without danger, either to the tree or the dresser.

Thus may you safely and easily gather your fruit without falling, bruising or breaking of Cyons.

Thus is the best forme of a fruit tree, which I haue here only shadowed out for the better capacity of them that are led more with the eye, than the mind, craving pardon for the deformity, because I am nothing skillfull either in painting or caruing.

Imagine that the paper makes but one side of the Tree to appeare, the whole round compasse will giue leaue for many more armes, boughs, branches and Cyons.

The perfect forme of a Fruit tree.



If any thinke a tree cannot well be brought to this forme: *Experto crede Roberto.* I can shew diuers of them vnder twenty yeares of age.

The fittest time of the Moone for prouning is as of grafting, when the sap is ready to stirre (not proudly stirring) and so to couer the wound, and of the yere, a month before (or at least when) you graffe. Dresse Peares, Appicoks, Peaches, Cherries, and Bullys sooner. And old trees before young plants, you may dresse at any time betwixt Lease and Lease. And note, that where you take any thing away, the sap the next summer will be putting: be sure therefore when he puts a bud in any place where you would not haue him, rub it off with your finger.

And heere you must remember the common homely Pro-uerbe: Soone crookes the tree that good Camrell must bee. Beginne betime with trees, and doe what you list: but if you let them grow great and stubborne, you must doe as the trees list. They will not bend but breake, nor be wound without danger. A small branch will become a bough, and a bough an arme in bignesse. Then if you cut him, his wound will fester, and hardly, without good skill, reconer: therefore, obsta-

Time
best for
proi-
ning.

Dresse
betime.

Faults
of euill
drest
trees, &
the re-
medie.
The
forme
altered.

principijs. Of such wounds, and lesser, or any bough cut off a handfull or more from the body, comes hollownesse, and untimely death. And therfore when you cut, strike close, and cleane, and vprwards, and leaue no bunch.

This forme in some cases sometimes may be altered: If your tree, or trees, stand nere your Walkes, if it please your fancy more, let him not breake, till his boale be aboue your head: so may you walke vnder your trees at your pleasure. Or if you set your fruit trees for your shades in your Houses, then I respect not the forme of the tree, but the comeliness of the walke.

Dressing
of old
trees.
Faults
are siue,
& their
remedies.

All this hitherto spoken of dressing, must be vnderstood of young Plants, to be formed: it is meete somewhat be said for the instruction of them that haue old trees already formed, or rather deformed: for, *malum non vitatur nisi cognicum*. The faults therefore of a disordered tree, I finde to be siue: 1. An vnprofitable boale: 2. Waterboughes: 3. Fretters: 4. Suckers: and 5. One principall top.

1. Long
boale.

A long boale asketh much feeding, and the more he hath the more he desires, and gets (as a drunken man drinke, or a covetous man wealth) and the lesse remaines for the fruit, he puts his boughes into the aire, and makes them, the fruit, and it selfe more dangered with winde: for this I know no remedie, after that the tree is come to growth, once euill, neuer good.

No re-
medie.

2. Water
boughs.

Water boughes, or vndergrowth, are such boughes as grow low vnder others and are by them ouergrowne, ouershadowed, dropped on, and pinde for want of plentie of sap, and by that meanes in time die: For the sap presseth vprward; and it is like water in her course, where it findeth most issue, thither it floweth, leaving the other lesser stices dry: even as wealth to wealth, and much to more. These so long as they beare, they beare lesse, worse, and fewer fruit, and waterish.

Remedy

The remedie is easie, if they be not growne greater than your arme. Lop them close & cleane, & couer the middle of the wound, the next Summer when he is drie, with a salve made of tallow, tar, & a very little pitch, good for the couering of any such wound of a great tree: vnlesse it be barke-pild, and then a sear-cloth of fresh Butter, Honey, and Mace, presently (while the wound is greene) applyed, is a soueraigne remedie in summer especially. Some bind such wounds with a thumbe rope of Hay, moist, and rub it with dung.

Barke-
pild, and
the re-
medie.

Fret-

Fretters are, when as by the negligence of the Gardner, two, or more parts of the tree, or of diuers trées, as armes, boughs, branches, or twigs, grow so nere and close together, that one of them by rubbing, doth wound another. This fault of all other shewes the want of skill, or care (at least) in the Arborist: for here the hurt is apparant, and the remedy easie, saine to betime: galls and wounds incurable, but by taking away those members: for let them grow, and they will be worse and worse, and so kill themselves with euill strife for roomth, and danger the whole trée. Auoid them betime therefoze, as a common wealth doth boosome enemies.

A Sucker is a long, proud, and disorderly Cypion, growing straight vp (for pride of sap makes proud, long & straight growth) out of any lower parts of the trée, receiuing a great part of the sap, and bearing no fruit, till it haue tyrannized ouer the whole trée: These are like idle and great Drones amongst Bees; and proud and idle members in a common-wealth.

The remedy of this is, as of water-boughes, vnlesse he be growne greater, then all the rest of the boughs, and then your Gardner (at your discretion) may leaue him for his boale, and take away all, or the most of the rest. If he be little, slip him, and let him, perhaps he will take: my fairest Apple-trée was such a Slip.

One or two principall top boughs are as euill, in a manner, as Suckers, they rise of the same cause, and receiue the same remedy: yet these are more tolerable, because these beare fruit, yea the best: but Suckers of long doe not beare.

I know not how your trée should be faulty, if you refozme all your vices timely, and orderly. As these rules serue for dressing young trées and sets in the first planting: so may they well serue to helpe old trées, though not exactly to recouer them.

The Instruments fittest for all these purposes, are most commonly: For the great Trées an handsome, long, light Ladder of Firpoles, a little, nimble, and strong armed Saw, and Sharpe. For lesse Trées, a little and sharpe Hatchet, a broad mouthed Cheseill, strong and sharpe, with an handbéele, your strong and sharpe Cleauer, with a knock, and (which is a most necessary Instrument amongst little Trées) a great hasted and sharpe Knife or Whittle. And as needfull is a

3.
Fretters.

Touch-
ing.
Remedy.

4.
Suckers.

Remedy

5.
One
princi-
pal top or
bough,
and re-
medy.

Instru-
ments
for dres-
sing.

Stole

Stole on the top of a Ladder of eight or more rungs, with two backe feet, whereon you may safely and easelily stand to graffe, to dresse, and to gather fruit, thus foisted: The feet may be fast wedged in: but the Ladder must hang loose, with two bands of iron. And thus much of dressing trees for fruit, formally to profit.



CHAP. XII.

Of Foyling.

Necessi-
ty of foy-
ling.



Here is one thing yet very necessary for to make your Orchard both better, and more lasting: Yea, so necessary, that without it your Orchard cannot last, nor prosper long, which is neglected generally both in precepts and in practise, viz. manuring with Foile: whereby it hapneth that when trees (amongst other evils) through want of fatnesse to feede them, become mossie, and in their growth are euill (or not) thriuing, it is either attributed to some wrong cause, as age (when indeed they are but young) or euill standing (stand they neuer so well) or such like, or else the cause is altogether unknowne, and so not amended.

Trees
great
suckers.

Great
bodies.

Can there be deuised any way by nature, or art, sooner or sounder to seeke out, and take away the heart and strength of earth, than by great trees? Such great bodies cannot bee sustained without great store of sap. What living body haue you greater than of trees? The great Sea-monsters (whereof one came a land at Teesmouth in Yorkshire, hard by vs, 18. yards in length, and nere as much in compasse) seeme hideous, huge, strange, & monstrous, because they be indeed great: but especially, because they are seldome scene: But a tree liking, come to his growth and age, twice that length, and of a bulke neuer so great, besides his other parts, is not admired, because he is so commonly scene. And I doubt not, but if he were well regarded from his kirknell, by succeeding ages, to his full strength, the most of them would double their measure. About fifty yeeres agoe I heard by credible and constant report, That in Brooham Parke in West-moze-land, nere vnto Penrich, there lay a blowne

blatone Oake, whose Trunke was so bigge, that two Hoyle-
men being the one on the one side, and the other on the other
side, they could not one see another: to which if you adde his
armes, boughs, and roots, and consider of his bignesse, what
would he haue bene, if preserved to the vantage. Also I read in
the History of the West-Indians, out of Peter-Martyr, That
fiftene mentaking hands one with another, were not able to
fathome one of those trees about. Now Nature hauing giuen
to such a faculty by large and infinite roots, talues and tangles,
to draw immediatly his sustentance from our common mother
the Earth (which is like in this point to all other mothers that
beare) hath also ordained that the Tree over-loden with fruit,
and wanting sap to feed all she hath brought forth, will waine
all she cannot feed, like a woman bringing forth moe children at
once then she hath teats. See you not how Trees especially, by
kind being great, standing so thicke and close, that they cannot
get plenty of sap, pine away all the grasse, weeds, lesser shrubs,
and trees, yea and themselves also for want of vigor of sap?
So that trees growing large, sucking the soile whereon they
stand, continually, and amaine, and the foyson of the earth that
feeds them decaying (for what is there that wastes continually,
that shall not haue end?) must either haue supply of sucken, or
else leaue thriuing and growing. Some grounds will beare
Cozne while they be new, and no longer, because their crust is
shallow, and not very good, and lying high they scind and wash,
and become barren. The ordinary Cozne soiles continue not
fertill, without following and foyling, and the best requires
supply, euen for the little body of Cozne. How then can wee
thinke that any ground (how good soeuer) can sustaine bodies
of such greatnesse, and such great feeding, without great plenty
of Sap arising from good earth? This is one of the chiefe
causes, why so many of our Orchards in England are so e-
uill thriuing when they come to growth, and our fruit so bad.
Men are loth to bestow much ground, and desire much fruit,
and will neither set their trees in sufficient compasse, nor yet
feed them with manure. Therefore of necessity Orchards must
be soiled.

The fittest time is, when your Trees are growne great, Time fit
and haue nere hand spread your earth, wanting new earth to for foy-
sustains ling.

Kind of
foyle.

sustaine them, which if they do, they will seeke abroad for better earth, and shun that, which is barren (if they find better) as cattell enill pasturing. For nature hath taught every creature to desire and seeke his owne good, and to auoid hurt. The best time of the yeere is at the Fall, that the Frost may bite and make it tender, and the Raine wash it into the roots. The Summer time is perillous if ye dig, because the sap stirs amaine. The best kinde of Foyle is such as is fat, hot, and tender. Your earth must be but lightly opened, that the dung may goe in, and wash away; and but shallow, lest you hurt the roots: & in the spring, closely and equally made plaine againe for feare of Suckers. I could wish, that after my Trees haue fully possessed the soile of mine Orchard, that euery seuen yeeres at least, the soile were bespreed with dung halfe a foot thicke at least. Puddle water out of the dunghill powred on plentifully, will not only moisten but fatten especially in Iune and Iuly. If it bee thicke and fat and applied euery yeere your Orchard shall need none other soiling. Your ground may lye so low at the Riuer side, that the flood standing some daies and nights thereon, shall saue you all this laboure of soiling.

CHAP. XLII.

Of Annoyances.



Two
kinds of
euils in
an Or-
chard.

Chiefe helpe to make euery thing good, is to auoid the euils thereof: You shall neuer attaine to that good of your Orchard you looke for, vnlesse you haue a Gardener, that can discern the diseases of your trees, & other annoyances of your Orchard, & find out the causes thereof, and know & apply fit remedies for the same. For be your ground, site, plants, and trees as you would wish, if they be wasted with hurtful things, what haue you gained but your laboz for your trauel: It is with an Orchard & euery tree, as with mans body. The best part of physicke for preservation of health, is to foresee & cure diseases.

All the diseases of an Orchard are of two sorts, either internal or external. I call those inward hurts which breed on and in particular trees.

Galls. 1. Canker. 2. Barke bound. 3. Barke pild. 4. Moſſe. 5. Worme. 6. Weaknes in ſetting. 7. Deadly wounds.

Galls, Canker, Moſſe, weakneſſe, though they bee diuers diſeaſes: yet (howſoener Authoꝝ thinke otherwiſe) they riſe all out of the ſame cauſe.

Galls we haue deſcribed with their cauſe and remedy, in the 11. Chapter vnder the name of fretters. Galls.

Canker is the conſumption of any part of the tree, barke and wood, which alſo in the ſame place is deciphered vnder the title of water-boughes. Canker.

Moſſe is ſenſibly ſene and knowne of all, the cauſe is pointed out in ſame Chapter, in the diſcourſe of Timber-wood, and partly alſo the remedy: But for Moſſe adde this, That at any time in ſummer (the Spring is beſt) when the cauſe is remoued, with an Harcloth, immediatly after a ſhower of raine, rub off your Moſſe, or with a peece of weed (if the Moſſe abound) ſoꝛmed like a great knife. Moſſe.

Weakneſſe in the ſetting of your fruit ſhall you finde there alſo in the ſame Chapter, and his remedy. All theſe flow from the want of roomth in good ſoile, wrong planting, Chap. 7. and euill or no dreſſing. Weakneſſe in ſetting.

Barke-bound (as I thinke) riſeth of the ſame cauſe, and the beſt, and preſent remedy (the cauſes being taken away) is with your ſharpe knife in the Spring, length-way to launch his barke through out, on thre or foure ſides of his boale. Barke-bound.

The diſeaſe called the Worme is thus diſcerned: The barke will be boald in diuers places like gall, the wood will die & dry, & you ſhall ſee eaſily the barke ſwell. It is verily to be thought, that therein is bred ſome worme. I haue not yet thorowly ſought it out, becauſe I was neuer troubled therewithall: but only haue ſene ſuch trees in diuers places. I thinke it a worme rather, becauſe I ſee this diſeaſe in trees, bringing fruit of ſweet taſte, & the ſwelling ſhelues as much. The remedy (as I coniecture) is ſo ſame as you perceiue the wound, the next ſpring cut it out barke & all, and apply Cowes piſſe & vinegar preſently, and ſo wiſe or thre or foure weeke for a Moneths ſpace: For I well perceiue, if you ſuffer it any time, it eates the tree or bough round, & ſo kills. Worme.

Remedy

Since I first wrote this Treatise, I have changed my mind concerning the disease called the woyme, because I read in the History of the West-Indies that their trees are not troubled with the disease called the woyme or canker, which ariseth of a raw and euill concocted humor or sap, whitherso Pliny, by reason their Countrey is more hot then ours, whereof I thinke the best remedy is (not disallowing the former, considering that the woyme may breed by such an humor) waime standing, sound lopping and good dressing.

Bark-
pilde.

Wounds.

Remedy.

Hurts
on trees.
Ants,
Earwigs,
Cater-
pillars,
and such
like
wormes.

External
cauls.

Bark-pild you shall find with his remedy in the 11. Chapter. Deadly wounds are when a mans Achorist wanting skill, cuts off armes, boughs or branches an inch, or (as I see sometimes) an halfe foot, or halfe a foot or more from the body: These so cut cannot come in any time with sap, and therefore they die, and dying they perishe the heart, and so the tree becomes hollow, and with such a deadly wound cannot live long.

The remedy is, if you find him before he be perished, cut him close, as in the 11. Chapter: if he be hoard, cut him close, fill his wound, the neuer so deepe, with morter well tempered and so close at the top his wound with a Beare-cloth doubled & nailed on, that no aire nor raine approach his wound. If he be not very old, and detaining, he will recover, and the hole being closed, his wound within shall not hurt him for many yeeres.

Hurts on your trees are chiefly Ants, Carewigs, and Caterpillars. Of Ants and Carewigs is said Chap. 10. Let there be no waime of bismitres neere your Tree nor, no not in your Orchard, turne them ouer in a frost, and poure in water, and you kill them.

For Caterpillars, the bigilant Fenterer shall soon espy their lodging by their Web, or the decay of leaues eaten round about them. And being scene, they are easily destroyed with your hand, or rather (if your tree may spare it) take spig and all (for the red perillous butter flye doth neuer put them, being her spawne among the tender sprays for better feeding, especially in drought, and tread them vnder your feet. I like nothing of smoke among my trees. Unnaturall heates are nothing good for naturall trees. This for diseases of particular trees.

External hurts are either things naturall or artificiall. Natural things, externally hurting Orchards:

Beasts

1 **Beasts.** 2 **Deere.** 3 **Birds.** 4 **Bulfinch.** 5 **Chaffinch.** 6 **Robin.** 7 **Wren.** 8 **Thrush.** 9 **Starling.** 10 **Goldfinch.** 11 **Partridge.** 12 **Pheasant.** 13 **Quail.** 14 **Guinea-fowl.** 15 **Peacock.** 16 **Swan.** 17 **Goose.** 18 **Duck.** 19 **Trout.** 20 **Salmon.** 21 **Perch.** 22 **Carp.** 23 **Sturgeon.** 24 **Worms.** 25 **Grubs.** 26 **Flies.** 27 **Bees.** 28 **Wasps.** 29 **Ants.** 30 **Spiders.** 31 **Scorpions.** 32 **Snails.** 33 **Slugs.** 34 **Toads.** 35 **Frogs.** 36 **Crabs.** 37 **Beetles.** 38 **Caterpillars.** 39 **Grasshoppers.** 40 **Locusts.** 41 **Flies.** 42 **Bees.** 43 **Wasps.** 44 **Ants.** 45 **Spiders.** 46 **Scorpions.** 47 **Snails.** 48 **Slugs.** 49 **Toads.** 50 **Frogs.** 51 **Crabs.** 52 **Beetles.** 53 **Caterpillars.** 54 **Grasshoppers.** 55 **Locusts.** 56 **Flies.** 57 **Bees.** 58 **Wasps.** 59 **Ants.** 60 **Spiders.** 61 **Scorpions.** 62 **Snails.** 63 **Slugs.** 64 **Toads.** 65 **Frogs.** 66 **Crabs.** 67 **Beetles.** 68 **Caterpillars.** 69 **Grasshoppers.** 70 **Locusts.** 71 **Flies.** 72 **Bees.** 73 **Wasps.** 74 **Ants.** 75 **Spiders.** 76 **Scorpions.** 77 **Snails.** 78 **Slugs.** 79 **Toads.** 80 **Frogs.** 81 **Crabs.** 82 **Beetles.** 83 **Caterpillars.** 84 **Grasshoppers.** 85 **Locusts.** 86 **Flies.** 87 **Bees.** 88 **Wasps.** 89 **Ants.** 90 **Spiders.** 91 **Scorpions.** 92 **Snails.** 93 **Slugs.** 94 **Toads.** 95 **Frogs.** 96 **Crabs.** 97 **Beetles.** 98 **Caterpillars.** 99 **Grasshoppers.** 100 **Locusts.**

The other things are,

1 **Winds.** 2 **Cold.** 3 **Heat.** 4 **Wet.** 5 **Dry.** 6 **Thunder.** 7 **Lightning.** 8 **Rain.** 9 **Snow.** 10 **Hail.** 11 **Fog.** 12 **Mist.** 13 **Clouds.** 14 **Stars.** 15 **Planets.** 16 **Comets.** 17 **Ships.** 18 **Castles.** 19 **Towns.** 20 **Countries.** 21 **Mountains.** 22 **Rivers.** 23 **Lakes.** 24 **Seas.** 25 **Oceans.** 26 **Islands.** 27 **Peninsulas.** 28 **Straits.** 29 **Canals.** 30 **Docks.** 31 **Harbours.** 32 **Fortresses.** 33 **Cities.** 34 **Villages.** 35 **Towns.** 36 **Countries.** 37 **Mountains.** 38 **Rivers.** 39 **Lakes.** 40 **Seas.** 41 **Oceans.** 42 **Islands.** 43 **Peninsulas.** 44 **Straits.** 45 **Canals.** 46 **Docks.** 47 **Harbours.** 48 **Fortresses.** 49 **Cities.** 50 **Villages.** 51 **Towns.** 52 **Countries.** 53 **Mountains.** 54 **Rivers.** 55 **Lakes.** 56 **Seas.** 57 **Oceans.** 58 **Islands.** 59 **Peninsulas.** 60 **Straits.** 61 **Canals.** 62 **Docks.** 63 **Harbours.** 64 **Fortresses.** 65 **Cities.** 66 **Villages.** 67 **Towns.** 68 **Countries.** 69 **Mountains.** 70 **Rivers.** 71 **Lakes.** 72 **Seas.** 73 **Oceans.** 74 **Islands.** 75 **Peninsulas.** 76 **Straits.** 77 **Canals.** 78 **Docks.** 79 **Harbours.** 80 **Fortresses.** 81 **Cities.** 82 **Villages.** 83 **Towns.** 84 **Countries.** 85 **Mountains.** 86 **Rivers.** 87 **Lakes.** 88 **Seas.** 89 **Oceans.** 90 **Islands.** 91 **Peninsulas.** 92 **Straits.** 93 **Canals.** 94 **Docks.** 95 **Harbours.** 96 **Fortresses.** 97 **Cities.** 98 **Villages.** 99 **Towns.** 100 **Countries.**

Extraneous and full evils are these:

1 **Walls.** 2 **Trenches.** 3 **Other works noisome done in or neere your Orchard.** 4 **Evill Neighbours.** 5 **A careless Master.** 6 **An indiscreet, negligent or no keeper.**

See you not here an whole Army of mischiefes banded in troups against the most fruitful trees the earth beares: a slaying pene good labour. Good things have most enemies.

A skillfull fraterer must put to his helping hand, and disband and put them to flight.

For the first ranke of beasts, besides your out strong fence, you must have a shrewd and swift Greyhound, a stone bow, gun, and if need require, an Apple with an hooke for a Deere, and an Ware-pipe for a Ware.

Your Cherries and other Berries when they be ripe, will draw all the Black-birds, Thrushes and Haw-pies to your Orchard. The Bulfinch is a denouer of your fruit in the bud, I have had whole trees shald out with them in Winter-time.

The best remedy here is a Stone-bow, a Pierce especially if you have a Gunnet or Spar-hawke in Winter to make the Black-birds into a bush or hedge.

The Gardener must cleanse his soile of all other Trees: but

Remedy

Deere, &c.

Birds.

Remedy

Other trees.

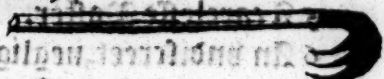
fruit trees aforesaid Chapter 2: for which it is ordained, and I would especially name Oakes, Elmes, Alders, and such other great wood, but that I doubt it should be taken as an admission of lesser trees: for I don't of nothing to grow in mine Orchard but Fruit and Flowers. If Sap can hardly be good to feed our Fruit-trees, why should we allow of any other, especially those, that will become their Masters, and wrong them in their livelihood.

And although we admit without the fence of Walnuts in most plaine places, Trees middle-most, and Aldes or Oakes, or Elmes utmost, set in comely rows equally distant with faire Allies twixt row and row to avoid the boisterous blasts of winds, and within them also others for Shade; yet we admit none of this into your Orchard-plot: other remedy then this have we none against the nipping frosts.

Winds.
Frosts.

Weeds.

Weeds in a fertile soile (because the generall curse is so) till your Trees grow great, will be noysome, and deforme your allies, walkes, beds, and squares, your binder Gardners must labour to keepe all cleanly and handsome from them, and all other filth with a Spade, weeding-knives, rake with iron teeth: a Sharple of Iron thus formed,



Remedy

For Nettles and ground-Ivy after a shewre.

Wormes
Moles.

When Weeds, straw, sticks, and all other scrapings are gathered together, burne them not, but bury them under your crust in any place of your Orchard, and they will dye and fatten your ground.

Remedy

Wormes and Moales open the earth, and let in aire to the roots of your Trees, & deforme your squares and walkes, & feeding in the earth, being in number infinite, draw on barrenness. Wormes may easily be destroyed. Any Summer evening when it is darke, after a shewre with a Candle, you may kill busshels, but you must tread nimbly. And where you cannot come to catch them so; sift the earth with coale ashes an inch or two thickly, and that is a plague to them, so is sharpe gadell.

Moales will anger you, if your Gardener or some skilfull Mole-catcher ease you not, especially having made their fortresses among the roots of your trees: you must watch her well with a

Mole.

spole-speare, at noone, none, and night, when you see her drawest hill, cast a trench betwixt her and her house (for she hath a principall mansion, to dwell and breed in about April, which you may discern by a principall hill, wherein you may catch her, if you trench it round and sure, and watch well): or wheresoeuer you can discern a single passage (for such she hath) there trench, and watch, and haue her.

Wilfull annoyances must be prevented and avoided by the Ioue of the Master and Fruturer, which they beare to their Orchard. Justice and liberality will put away euill neighbours or euill neighbour-hood. And then (if God blesse and giue successe to your labours) I see not what hurt your Orchard can sustaine.

Wilfull annoyances. Remedy.

CHAP. XIII.

Of the Age of Trees.



It is to be considered: All this Treatise of Trees tends to this end, that men may loue and plant Orchards; wherunto there cannot be a better inducement then that they know (or at least be perswaded) that all that benefit they shall reape thereby, whether of pleasure or profit, shall not be for a day or a month, or one, or many (but many hundred) yeeres. Of good things the greatest, and most durable is alwaies the best. If therfore out of reason grounded vpon experience, it bee made (I thinke) manifest, but I am sure probable, that a fruit-tree in such a soile and site, as is described so planted and trimmed and kept, as is aforesaid appointed and duly soiled, shall dure 1000. yeeres, why should we not take paines, and be at two or three yeeres charges (for vnder seven yeeres will an Orchard be perfected for the first planting, and in that time be brought to fruit) to reape such a commodity, and so long lasting.

Let no man thinke this to be strange, but peruse and consider the reason. I haue Apple-trees standing in my little Orchard, which I haue knowne these forty yeeres, whose age before my time I cannot learne, it is beyond memory, tho I haue enquired of diuers aged men of 80. yeeres and vpwads: these trees although come into my possession very euill orde-

The age of trees.

Gathered by reason out of experience.

red.

red, with open, and one of them wounded to his heart, and that deadly (for I know it will be his death) with a wound, wherein I might have put my foot in the heart of his bulke (now it is loose) notwithstanding, with that small regard they have had since, they so like, that I assure my selfe they are not come to their growth by more than 2. parts of 3. which I discern not only by their owne growth, but also by comparing them with the bulke of other trees. And I find them short (at least) by so many parts in bignesse, although I know those other fruit trees to have bene much hindzed in their stature by euill guiding. Wherefore I gather thus.

Parts of
a Trees
age.

If my trees be a hundred yeeres old, and yet want two hundred of their growth before they leaue encreasing, which make thre hundred, then we must needs resolue, that this thre hundred yeere are but the third part of a Trees life, because (as all things living besides) so Trees must haue allowed them for their encrease one third, another third for their stand, and a third part of time also for their decay. All which time of a Tree amounts to nine hundred yeeres, thre hundred for increase, thre hundred for his stand, whereof we haue the tearme stature, and thre hundred for his decay, and yet I thinke (for we must coniecture by comparing, because no one man liueth to see the full age of Trees) I am within the compasse of his age, supposing alwaies the foresaid meates of preserving his life. Consider the age of other living creatures. The Horse and miled Ore wrought to an untimely death, yet double the time of their increase. A Dog likewise increaseth thre, stands thre at least, and in as many (or rather more) decayes. Euery living thing bestowes the least part of his age in his growth, and so must it needs be with Trees. A man comes not to his full growth and strength (by common estimation) before thirty yeeres, and some slender and cleane bodies, not till forty, so long also stands his strength, and so long also must hee haue allowed by course of nature to decay. Euer supposing that he bee well kept with necessaries, and from and without straines, bruises, and all other dominyng diseases. I will not say vpon true report, that Physicke holds it possible, that a cleane body kept by these 3. Doctors, Doctor Dyer, Doctor Quier, and Doctor Merriman, may liue nere a hundred yeeres. Neither

Mans
age.

Neither will I beere vge the long yeeres of Methushalah, and those men of that time, because you will say, Mans dayes are shortned since the flood. But what hath shortned them? God for mans sinnes: but by meanes, as want of knowledge, euill gouernement, ryot, gluttony, drunkennes, and (to be short) the encrease of the curse, our sinnes increasing in an iron and wicked age.

Now if a man, whose body is nothing (in a manner) but tender rottenesse, whose course of life cannot by any meanes, by counsell, restraint of lawes, or punishment, nor hope of praise, profit, or eternall glozy, be kept within any bounds, who is degenerate cleane from his naturall feeding, to effeminate nicenesse, and cloying his body with excesse of meat, drinke, sleepe, &c. and to whom nothing is so pleasant and so much desired as the causes of his owne death, as idlenesse, lust, &c. may line to that age: I see not but a tree of a solide substance, not daunted by heate or cold, capable of, and subiect to any kinde of ordering or dressing, that a man shall apply vnto him, feeding naturally, as from the beginning disburdened of all superfluties, eased of, and of his owne accoord auoiding the causes that may annoy him, should double the life of a man, more than twice fold; and yet naturall philosophy, and the vniuersall consent of all Historiies tell vs, that many other lining creatures farre exceed man in the length of yeeres: As the Hart and the Raven. Thus reporteth that famous Roterodam out of Hesiodus, and many other Historiographers. The testimony of Cicero in his booke De Senectute, is weighty to this purpose: that we must in posteritas etates ferere arbores, which can haue none other sence: but that our fruit trees, whereof he speaks, can endure for many ages.

What else are trees in comparison with the earth: but as haire to the body of man: And it is certaine, without poisoning, euill and distemperate dyet, and blage, or other such forcible cause, the haire dure with the body. That they be called excrements, it is by reason of their superfluous growth: (for cut them as often as you list, and they will still come to their naturall length.) Not in respect of their substance, and nature. Haires endure long, and are an ornament and vse also to the body, as trees to the earth.

So that I resolve upon good reason, that fruit-trees well ordered, may live and like a thousand yeeres, and beare fruit, and the longer, the more, the greater, and the better, because his vigour is proud and stronger, when his yeeres are many: You shall see old trees put their buds and blossomes both sooner and more plentifully than yong trees by much. And I sensibly perceine my yong trees to enlarge their fruit, as they grow greater, both for number, and greatnesse. Yong Beifers bring not forth Calves so faire, neither are they so plentiful to milke, as when they become old kine. No good Housewife will breed of a yong but an old bird-mother: It is so in all things naturally, therefore in trees.

The age of
timber
trees.

And if fruit-trees last to this age, how many ages is it to be supposed, strong and huge timber trees will last: whose huge bodies require the yeeres of diuers Methushalahes, before they end their dayes, whose Sap is strong and bitter, whose Barke is hard and thicke, and their substance solid and stiff: all which are defences of health and long life. Their strength withstands all forcible winds, their sap of that quality is not subject to wormes and tainting. Their bark receiues seldeome or neuer by casualty any wound, and not onely so, but he is free from remouals, which are the death of millions of trees, whereas the fruit tree in comparison is little, and often blowne downe, his sap sweet, easily, and soone tainted, his barke tender, and soone wounded, and himselfe used by man, as man wtheth himselfe, that is either unskillfully, or carelessly.

Age of
trees dis-
cerned.

It is good for some purposes to regard the age of your fruit trees, which you may easily know, till they come to accomplish twenty yeeres, by his knots: Metton from his root by an arme, and so to his top twig, & every yeeres growth is distinguished from other by a knot, except lopping or remouing doe hinder.

CHAP. XV.

Of gathering and keeping Fruit.

Generall
Rule.

Although it be an easie matter, when God shal send it, to gather and keepe fruit, yet are there certaine things worthy your regard. You must gather your fruit when it is ripe, and not before, else will it wither and be tough and sowre. All fruit generally are ripe, when they beginne to fall.

fall. For Trees doe as all other bearers doe, when their yong ones are ripe, they will loaine them. The Dove her Pigeons, the Cony her Rabbits, and women their children. Some fruit trees sometimes getting a taint in the setting with a frost or e- nill winde, will cast his fruit untimely, but not befoze he leaue giuing them sap, or they leaue growing. Except fro this soe- said rule, Cherries, Damsons, and Bullies. The Cherry is Cherries, ripe when he is swelt wholly red, and sweet: Damsons and &c. Bullies not befoze the first frost.

Apples are knowne to bee ripe, partly by their colour, Apples, growing towards a yellow, except the Leather-coat and some Peares and Greening.

Chiefly Summer fruit will be ready, some at Midsummer, When, most at Lammas for present vse; but generally no keeping fruit befoze Michael tide. Hard Winter fruit and Wardens longer.

Gather at the fall of the Moone for keeping, gather dry, for Dry stalkes. feare of rotting.

Gather the stalkes withall: for a little wound in fruit, is deadly: but not the stump, that must beare the next fruit, nor leaues, for moisture putrefies.

Gather euery kinde seuerally by it selfe, for all will not keep Seuerally, alike, and it is hard to discerne them, when they are mingled.

If your trees be ouer-laden (as they will be, being ordered, Overladen trees. as is befoze taught you) I like better of pulling some off (tho they be not ripe) neere the top end of the bough, then of prop- ping by much, the rest shall be better fed. Propping puts the bough in danger, and frets it at least.

Instruments: A long Ladder of light Firre: A scole-lad- der as in the 11. Chapter. A gathering appon like a poake be- Instruments. foze you, made of purpose, or a Walleet hung on a bough, or a basket with a fine bottome, or skinne bottome, with Lathes or splinters vnder, hung in a rope to pull by & down: Bruise none, Bruises. euery bruise is to fruit death: if you doe, vse them presently. An hooke to pul boughs to you is necessary, breake no boughes.

For keeping, lay them in a dry Loft, the longest keeping Keeping. Apples first and furthest on dry straw, on heapes ten or four- teene dayes, thicke, that they may sweat. Then dry them with a soft & cleane cloth, and lay them thinne abroad. Long keeping

fruit would bee turned once in a moneth softly: but not in no^o immediately after frost. In a loft couer well with straw, but rather with chaffe o^r bzan: For frost doth cause tender rottenness.

CHAP. XVI. Of Profits.

Now pause with your selfe, and view the end of all your labours in an Orchard: unspeakeable pleasure, and infinite commoditie. The pleasure of an Orchard I referre to the last Chapter for the conclusion: and in this Chapter, a word o^r two of the profit, which thorowly to declare is past my skill, and I count it as if a man should attempt to adde light to the Sunne with a Candle, o^r number the Starres. No man that hath but a meane Orchard o^r iudgement but knowes, that the commoditie of an Orchard is great: Neither would I speake of this, being a thing so manifest to all; but that I see, that through the carelesse lazinesse of men, it is a thing generally neglected. But let them know, that they lose hereby the chiefest good which belongs to housekeeping.

Compare the commoditie that cometh of halfe an acre of ground, set with fruit trees and hearbs, so as is prescribed, and a whole Acre (say it be two) with Cozne, o^r the best commoditie you can wish, and the Orchard shall exceed by divers degrees.

Cydar and
Perry.

In France and some other Countries, and in England, they make great vse of Cydar and Perry, thus made: Dresse every Apple, the stalk, upper end, and all galles away; Stamp them, and straine them, and within 24. houres tunne them vp into cleane, sweet, and sound vessels, for feare of euill ayre, which they will readily take: and if you hang a poake full of Clones, Mace, Nutmegs, Cinamon, Ginger, and pills of Lemmons in the midst of the vessell, it will make it as wholesome and pleasant as wine. The like vsage doth Perry require. These drinks are very wholesome, they coole, purge, and preuent hot Agues. But I leave this skill to Physitians.

Fruit.

The benefit of your Fruit, Rootes and Hearbs, though it were but to eat and sell, is much.

Waters.

Waters distilled of Roses, Woodbind, Angelica, are both profitable and wonderous pleasant, and comfortable.

Saffron

Saffron and Lycoriz will yeeld you much Conserues and Preserues, are ornaments to your Feasts, health in your sicknesse, and a good helpe to your friend, and to your purse.

He that will not be moued with such vnspcakable profits,
is well worthy to want, when others abound in plenty of good
things.

CHAP. XVII. *Ornaments.*

Me thinks hitherto we have but a bare Orchard for fruit,
and but halfe good, so long as it wants those comely
Ornaments, that should give beauty to all our labours,
and make much for the honest delight of the owner and his
friends.

For it is not to be doubted : but as God hath given man things profitable, so hath hee allowed him honest comfort, delight, and recreation in all the works of his hands. Nay, all his labours under the Sunne without this are troubles, and vexation of minde : For what is greivous paine, without delight, but moping, and tawmoping in idleness ? But comfortable delight, with content, is the gods of every thing, and the patternes of heauen. A morsell of bread with comfort, is better by much than a fat Ore with inquietness. And who can deny, but the principall end of any Dychar, is the honest delight of one toyled with the works of his Idoll : earling ? The very works of, and in an Dychar & Garden, are better than the ease and rest of any staid other labours. When God had made man after his owne Image, in a perfect state, and would have him to represent himselfe in authority, tranquillitie, & pleasure upon the earth, he placed him in Paradise. What was Paradise ? but a Garden and Dychar of trees and herbes, full of all pleasure : nothing there but delights. The gods of the earth, resembling the great God of heauen in authority, Maiestie, and abundance of all things, wherein is their most delight ? And whither doe they withdraw themselves from the troublesome affayres of their estate, being tyed with the hearing and iudging of litigious Controversies : choked (as it were) with the close ayres of their sumptuous hallings, their stomachs cloyed with varieties of Banquets, their eares filled & overburthened with tedious discourses :

Conferences:

Delight
the chiefe
end of
Orchards.

An Or:
chard de-
lightsome

An Or-
chard is
Paradise.

**Causes of
wearisome-
nesse.**

Orchard is
theremedie.

whither? but into their Orchards: made and prepared, dyed
sed and destinated for that purpose, to reueue and refresh their
sences, and to call home their over-wearied spirits. Nay, it is
(no doubt) a comfort to them, to set open their Casements in-
to a most delicate Garden and Orchard, whereby they may not
onely see that, wherein they are so much delighted, but also to
giue fresh, sweet, and pleasant ayze to their Galleries and
Chambers.

All delight
in Or-
chards.

And looke, what these men doe by reason of their greatnesse
and abilitie, prouoked with delight, the same doubtlesse would
enery of vs doe, if power were answerable to our desires,
whereby we shew manifestly, that of al other delights on earth,
they that are taken by Orchards, are most excellent, and most
agreeing with nature.

This de-
lights all
the senses.

For whereas enery other pleasure commonly fills some one
of our senses, and that onely, with delight, this makes all our
sences swimmie in pleasure, and that with infinit variety, toy-
ned with no lesse commonitie.

Delighteth
old age.

That famous Philosopher, & matchlesse Orator, M. T. C.
prescribeth nothing more fit, to take away the tediousness
and heauy load of thre or foure score yeares, than the pleasure
of an Orchard.

Causes of
delight in an
Orchard.

What can your eye desire to see, your eares to heare, your
mouth to taste, or your nose to smell, that is not to be had in an
Orchard, with abundance and variety? What more delight-
some than an infinite varietie of sweet smelling flowers? deck-
ing with sundry coloures, the Greene mantle of the Earth, the
vniuersall Mother of us all, so by them bespotted, so dyed, that
all the world cannot sample them, and wherein it is more fit to
admire the Dyer, than imitate his workmanship. Colouring
not onely the earth, but decking the ayre, and sweetning enery
bzeath and spirit.

Flowers.

The Rose red, damaske, helmet, and double double pountaine
Rose, the sweet muske Rose double and single, the double and
single white Rose. The faire and sweet senting Mosbinder,
double and single, and double double: Purple Cowslips, and
double Cowslips, and double double Cowslips. Pymerose
double and single. The Violet nothing behind the best, for
smelling sweetly. And too, more will prouoke your content.

And

And all these, by the skill of your Gardiner, so comely, and orderly placed in your Borders and Squares, and so intermingled, that none looking thereon, cannot but wonder, to see what nature corrected by Art can doe.

When you behold in diuers corners of your Orchard Mounts of Stone, or wood curiously wrought within and without, or of earth couered with fruit-trees: Kentish Cherry, Damsons, plummets, &c. With staires of precious workmanship. And in some corner (or more) a true Dyall, or Clocke, and some Anticke workes; & especially silver-sounding Musique, mixt Instruments and voices, gracing all the rest: How will you be rapt with delight?

Large Walkes, broad & long, close and open, like the Temples groves in Thessalie, raised with gravel and sand, having seats and banks of Camomile, all this delights the minde, & brings health to the body.

View now with delight the workes of your owne hands, your fruit trees of all sorts, laden with sweet blossomes, and fruit of all tastes, operations, and colours: your trees standing in comely order which may sooner you looke.

Your borders on euery side hanging and drooping with Feberries, Raspberries, Barberries, Currans, and the routes of your trees powdered with Strawberries, red, white, and green: what a pleasure is this? Your Gardiner can frame your lesser wood in the shape of men armed in the field, ready to giue battell: or swift running Greyhounds: or of well fenced and true running Hounds, to chase the Deere, or hunt the Hare. This kinde of hunting shall not waste your cogneyne, nor with your cogneyne.

Pages well framed a man's height, may perhaps make your friend wander in gathering of berries, till hee cannot reconvert himselfe without your helpe. To haue occasion to enter the within your Orchard: it shall be a pleasure to haue a winding Alley, or rather (which is more manly, and more healthfull) a paire of Butts, to stretch your armes.

Rosemary and Sweet Aglantine are stately ornaments about a Doore or Window, so in Woodbinde.

Looke Chap. 5. and you shall see the fayne of a Con-

Borders and Squares.

Mounts.

Whence

you may

shoote, and

Bucke.

Dyall.

Musique.

Walkes.

Seats.

Order of

trees.

Shape of men and beasts.

Mazes.

Bowle.

Ally.

Buts.

Hearbs.

Con-

Riuer.

Moats.

Bees.

Vine.

Birds.

Nightin-
gale.Robin-red-
breft.

Wren.

Black-bird.
Thrush.

built. If there were two or moze, it were not amisse. And in mine opinion, I could highly commend your Orchard, if either there be a hard by it, there should runne a pleasant Riuer with silver streames, you might sit in your Spout, and angle a peckled Trout, or Sleightie Cele, or some other Fish. Or Moats, whereon you might row with a Boat, and fish with Nets.

Stoze of Bees in a coze and warme Bee-house, comely made of Firboozes, to sing, and sit, and feed upon your flowers and sprouts, make a pleasant noyse and sight. For cleanly and innocent Bees, of all other things, loue and become, and thriue in an Orchard. If they thriue (as they must needs, if your Gardiner be skilfull, & loue them: for they loue their friends, and hate none but their enemies) they will, besides the pleasure, yeeld great profit, to pay him his wages. Yea, the increase of twenty Stocks or Stooles, with other fees, will keep your Orchard. You need not doubt their stings, for they hurt not whom they know, and they know their keeper and acquaintance. If you like not to come amongst them, you need not doubt them: for but neere their stoze, and in their stone defence, they will not fight, and in that case onely (and who can blame them?) they are manly, and fight desperately. Some (as that Honourable Lady at Hacknes, whose name doth much grace mine Orchard) vse to make seats for them in the Stone wall of their Orchard, or Garden, which is good, but wood is better.

A Vine ouer shadowing a seat, is very comely, though her Grapes with vs ripe stowp.

One chiefe grace that adorns an Orchard, I cannot let slip: A brood of Nightingales, who with their senerall notes and tunes, with a strong delightfome voice, out of a weake body, will beare you company night and day. She loues (and liues in) hots of woods in her heart. She will helpe you to cleanse your trees of Caterpillers, and all noisome wozmes and Ayes. The gentle Robin-red-breft will helpe her, and in Winter in the coldest stozmes will keepe a part. Neither will the silly Wren be behinde in Summer, with her distinct whistle (like a sweet Recorder) to cheere your spirits.

The Black-bird and Thyselle (for I take it the Thrush sings not,

not, but deuourres) sing loudly in a May morning, and delights the eare much (and you need not want their company, if you haue ripe Cherries or Berries, and would as gladly as the rest doe you pleasure:) But I had rather want their company than my fruit.

What shall I say? 1000. of delights are in an Orchard: and sooner shall I be weary, then I can reckon the least part of that pleasure, which one that hath and loues an Orchard, may finde therein.

What is there of all these few that I haue reckoned, which doth not please the eye, the eare, the smell, and taste? And by these sences as Organes, Pipes, and Windows, these delights are carried to refresh the gentle, generous, and noble minde.

To conclude, what say may you haue, that you lining to such an age, shall see the blessings of God on your labours while you liue, and leaue behinde you to your heires or successors (for God will make heires) such a worke, that many ages after your death, shall recozd your loue to your Country? And the rather, when you consider (Chap. 14.) to what length of time your worke is like to last.

Your owne
labour.

FINIS.

I

THE
COUNTRY
HOUSEWIVES
GARDEN.

Containing Rules for Hearbs and Seeds
of common vse, with their times and seasons,
when to set and sow them.

TOGETHER

With the Husbandry of Bees, published with secrets
very necessary for euery Housewife.

As also diuers new Knots for Gardens.

The Contents see at large in the last Page.

GEN. 2. 29.

*I haue giuen vnto you euery Herbe, and euery tree, that shall
be to you for meate.*



London printed for Roger Iackson. 1623.

THE
COUNTRY
HOUSEWIVES
GARDEN.

Containing Rules for Hedges and Seeds
of common vegetables, their times and seasons,
when to sow and how to raise them.

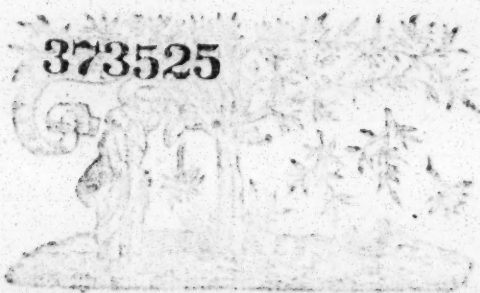
TOGETHER
With the Husbandry of Bees, and the Method of making
very necessary for every Housewife.

As also Divers new Manners for Ordering.

The Garden to be cultivated in the Year.

By Mrs. Elizabeth de la Motte, Lady of the Manor of
St. Albans, in the County of Hertford.

373525



London printed for J. Knapton, at the Sign of the Sun in St. Dunstons Church-yard, 1724.



THE COUNTRY HUSBANDS GARDEN.

Chapter 10

The Soyle



The soyle of an Orchard & Garden, differ only in these three points: First, the Gardens soyle would be somewhat dry. Dry. er, because hearbs being more tender than trees, can neither abide moisture nor drought, in such excessive measure, as trees; and therefore having a dryer soyle, remedy is easie against drought, if need be: water soundly, which may bee done with small labour, the compasse of a garden being nothing so great, as of an Orchard, and this is the cause (if they know it) that Gardiners raise their squares: but if moisture trouble you, I see no remedy without a generall danger, except in Hops, which de- Hops. light much in a low and sappy earth.

Secondly, the soyle of a Garden would be plaine and lenell, Plaine. at least every square (for we suppose the square to be the fittest forme) the reason: the earth of a Garden wanting such helpes, as should stay the water, which an Orchard hath, and the roots of hearbs being short, and not able to fetch their liquor from the bottome, are more annoyed by drought, and the Soyle being mellow and loose, is soone either washt away, or sends out his heart by too much drenching and washing.

Thirdly, if a garden soyle be not cleere of weeds, and namely,

The Country Housewifes Garden

of grasse, the hearbs shall neuer thriue: for how should good hearbs prosper, when euill weeds waite so fast: considering good hearbs are tender in respect of euill weeds: these being strengthened by nature, and the other by Art: Gardens haue small place in comparison, and therefore may the moze easily be fallowed, at the least one halfe yeere before, and the better dressed after it is framed. And you shall finde that cleane keeping doth not onely auoid danger of gathering weeds, but also is a speciall ornament, and leaues moze plentifull say for your tender hearbs.

CHAP. II.

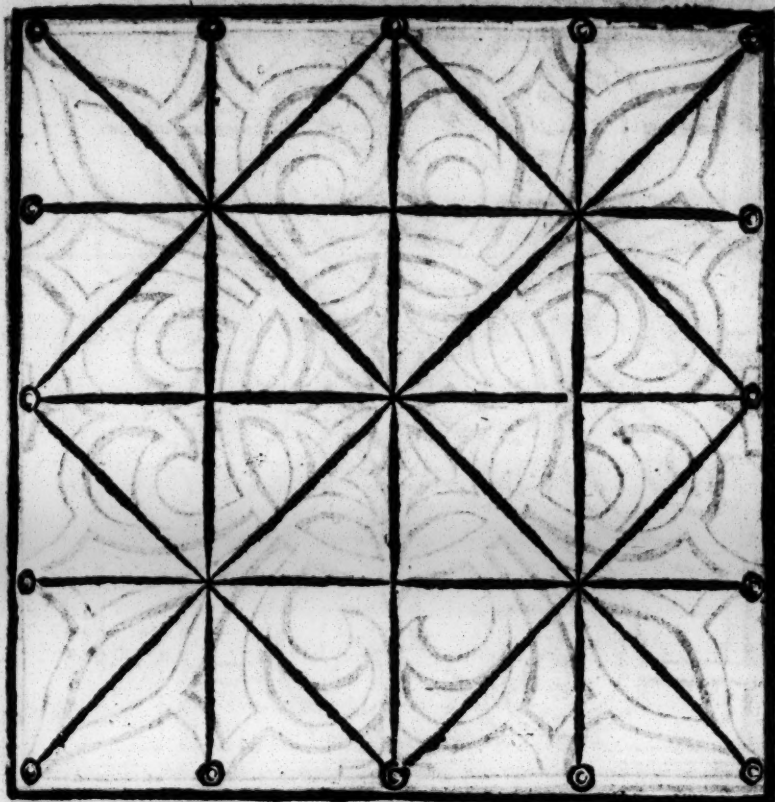
Of the Site.

I Cannot see in any sort, how the Site of the one should not be good, and fit for the other: The ends of both being one, good, wholesome, and much fruit to yae with delight, vntill trees be moze able to abbe the stinging frosts than tender hearbs: but I assure, the flowers & herbs are as some perished with cold, as any hearbe except Pompons, and Pelons.

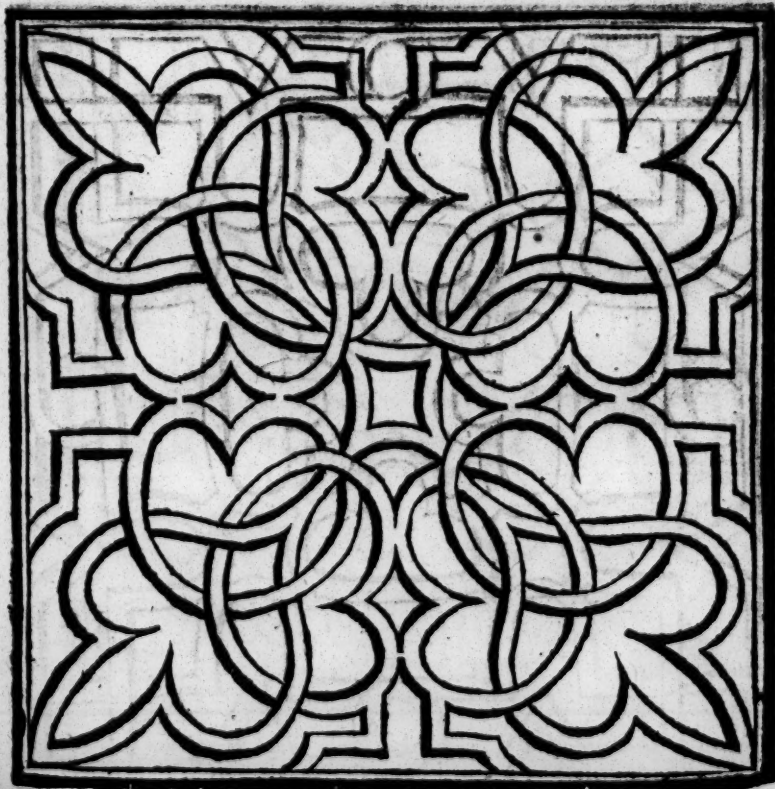
CHAP. III.

Of the forme.

Let that which is said in the Ordards to me, suffice for a Garden in generall: but for speciall formes in squares, they are as many, as there are deuices in Gardiners braines. Perther is the wit and art of a skilfull Gardiner in this point not to be commended, that can worke moze variety for breeding of moze delightfull choise, and of all those things, where the owner is able and desirous to be satisfied. The number of formes, Pazes and knots is so great, and men are so diuersly delighted, that I leaue euery Housewife to her selfe, especially seeing to set downe many, had been but to fill much paper; yet lest I deprive her of all delight and direction, let her vse these few, choise, new formes, and note this generally, that all plots are square, and al are bordred about with Myrtle, Raisons, Pea-herries, Roses, Thorne, Rosemarie, Wax-flowers, Pop, Sage, or such like.

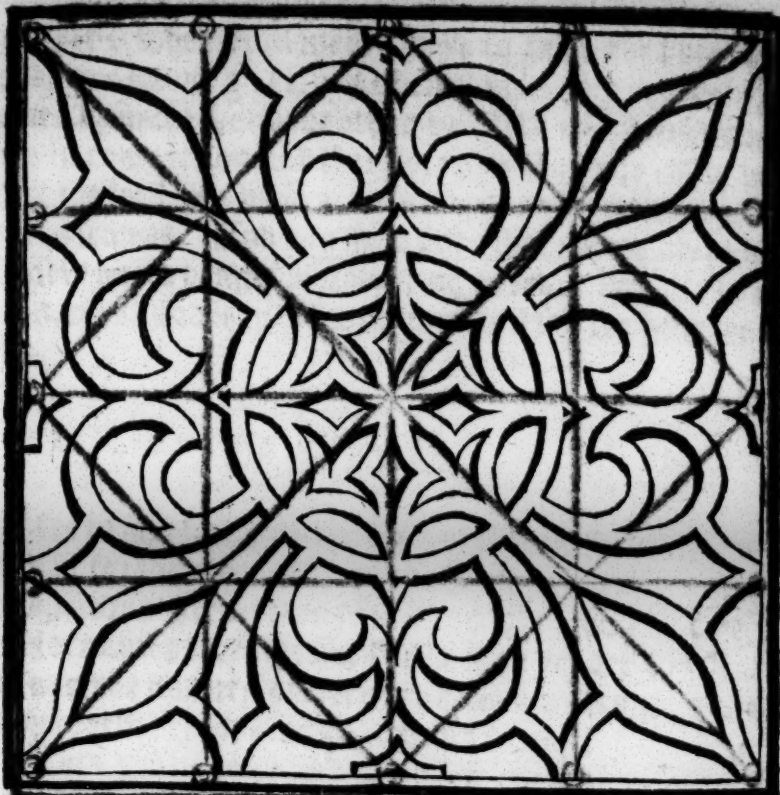


The ground
plot for
Knots.

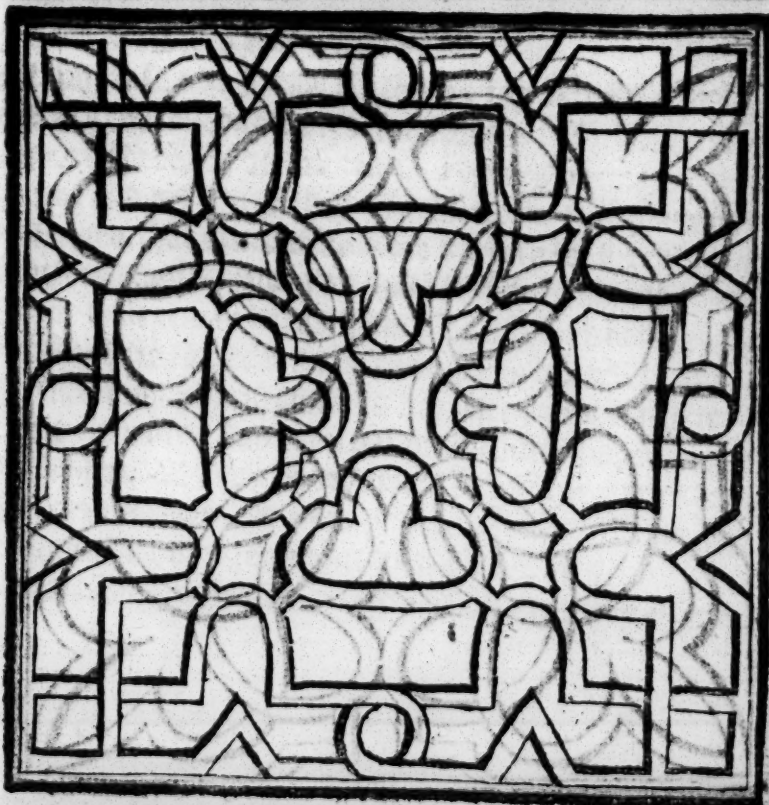


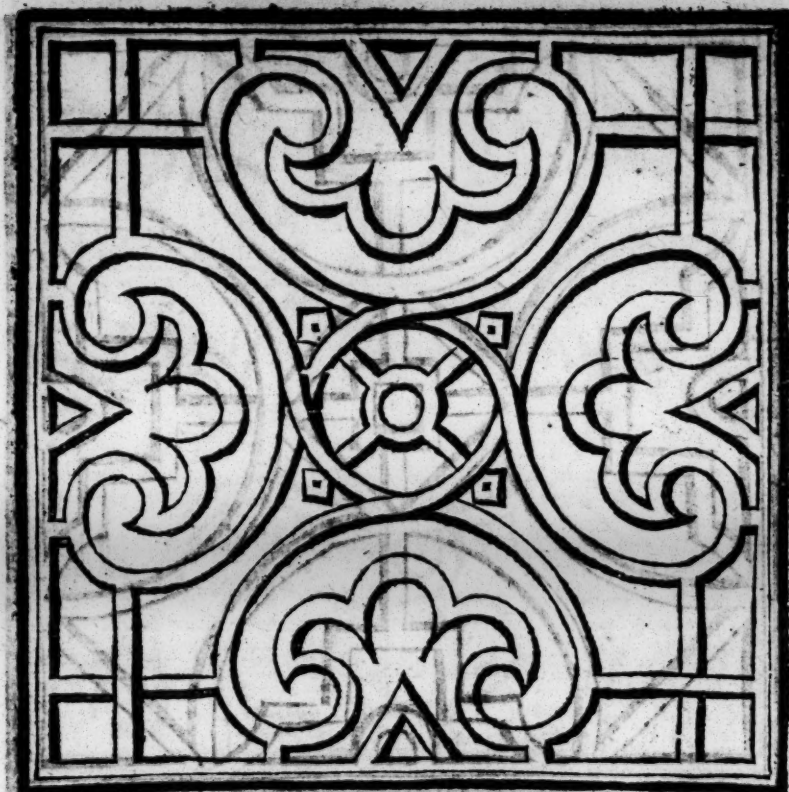
Cinkfoyle.

Flower
deluce
The
Knot

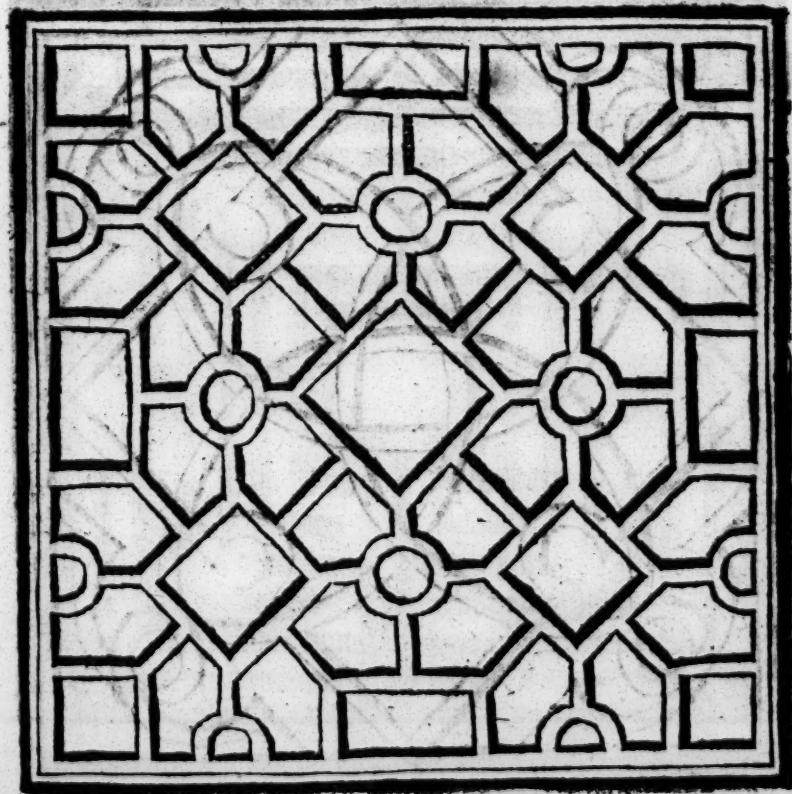


The Tre-
foyle



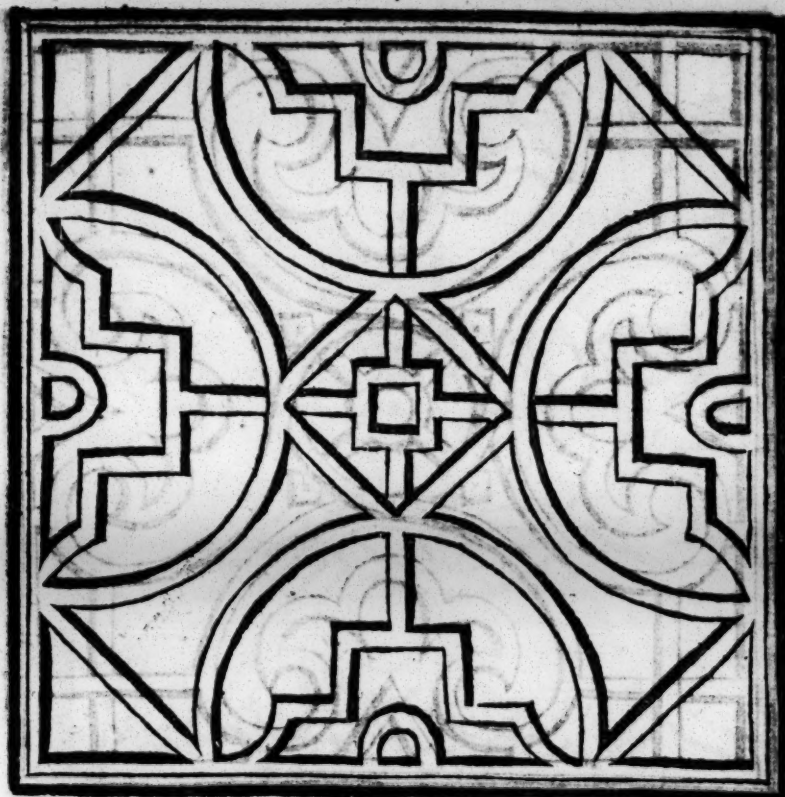


The Fret.



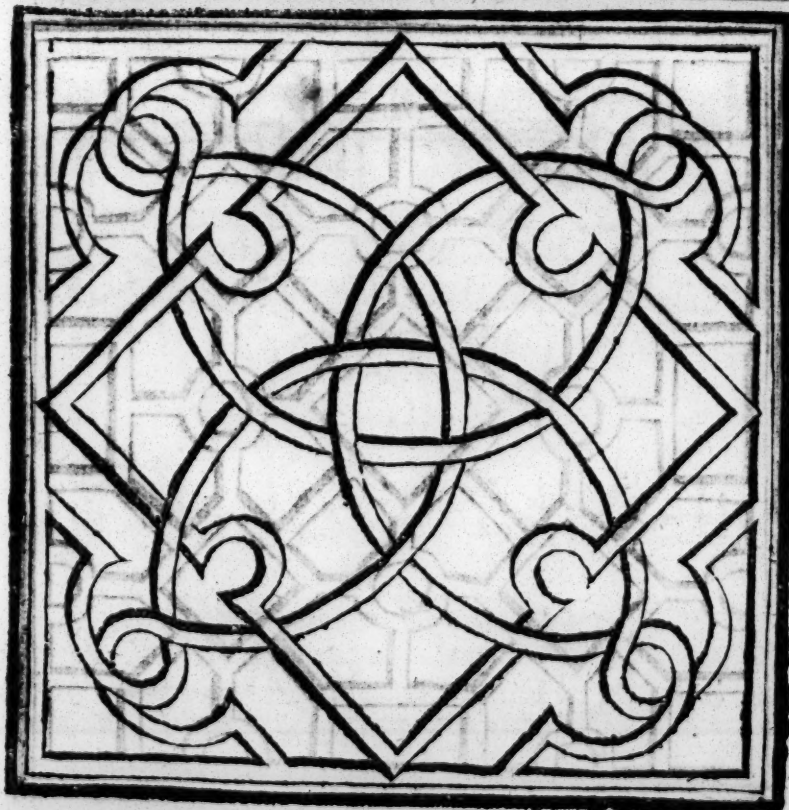
Lozengers.

Crosse.
bowe.



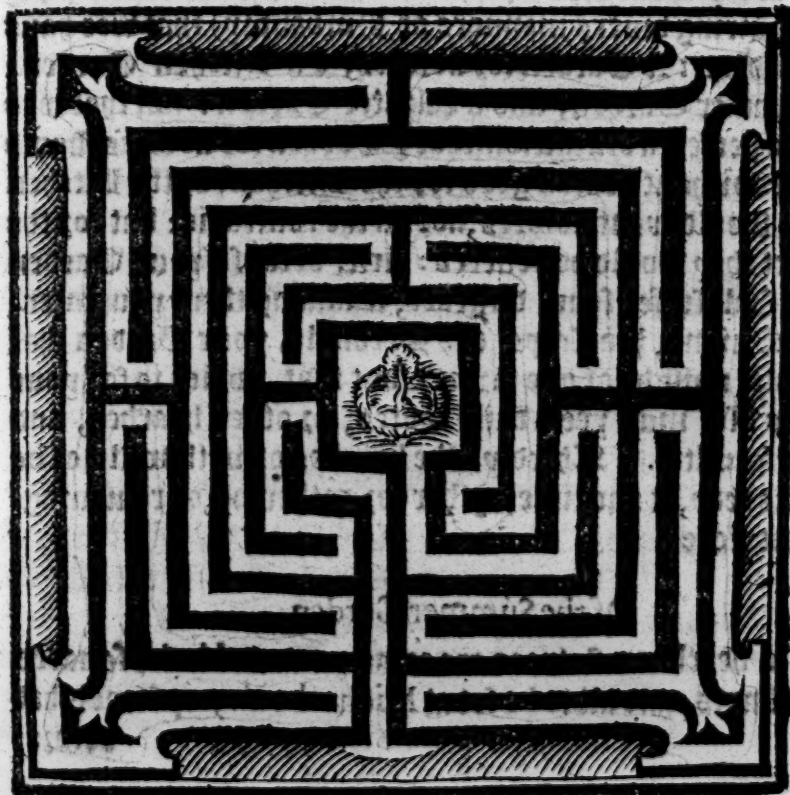
Diamond.

2000. 100. 1





Quail.



Maze.

The Country Housewives Garden.

CHAP. IIII. *Of the Quantitie.*

A Garden requirerh not so large a scope of ground as an Orchard, both in regard of the much Weeding, Dzeeling and remouing, and also the paines in a Garden is not so well repayed home, as in an Orchard. It is to be granted, that the Kitchen garden doth yeeld rich gaines by Berries, Rootes, Cabbages, &c. yet these are no way comparable to the fruits of a rich Orchard: but notwithstanding I am of opinion, that it were better for England, that we had more Orchards and Gardens, and more large. And therefore we leaue the quantitie to euery mans ability and will.

CHAP. V. *Of Fence.*

Seeing we allow Gardens in Orchard plots, and the benefit of a Garden is much, they both require a strong & shewding fence. Therefore leauing this, let vs come to the hearbs themselves, which must be the fruit of all these labours.

CHAP. VI. *Of two Gardens.*

Hearbes are of two sorts, and therefore it is meete (they requiring diuers manners of Husbandry) that wee haue two Gardens: A Garden for flowres, & a Kitchen Garden: or a Summer Garden, and a Winter Garden: not that wee meane so perfect a distinction, that y^e Garden for flowres should or can be without hearbs good for the Kitchen, or the Kitchen Garden should want flowres, nor on the contrarie: but for the most part they would be seuered: first, because your Garden flowres shall suffer some disgrace, if among them you intermingle Onions, Parsnips, &c. Secondly, your Garden that is durable, must be of one forme: but that, which is for your Kitchens vse, must yeeld daily rootes, or other hearbes, and suffer desozmitie. Thirdly, the hearbes of both will not be both alike ready, at one time, eyther for gathering, or remouing. First therefore

Of the Summer Garden.

These hearbes & flowres are comely & durable for squares and knots, and all to be set at Michael-tide, or somewhat before,

before, that they may be settled in, and taken with the ground, before Winter, though they may bee set, especially sowne in the Spring.

Roses of all sorts (spoken of in the Orchard,) must bee set. Some vse to set slippes and twine them, which sometimes, but seldome thriue all.

Rosemary, Lauender, Bee-flowers, Hop, Sage, Time, Cowslips, Hyony, Daffes, Cloue Gilliflowers, Pinks, Southernwood, Lillies, of all which hereafter.

Of the Kitchen Garden.

Though your Garden for flowers doth in a sort peculiarly challenge to it selfe a profit, and exquisite forme to the eyes, yet you may not altogether neglect this, where your hearbs for the pot doe grow. And therefore, some here make comely borders with y^e Hearbs aforesaid. The rather because abundance of Roses and Lauender yeeld much profit, and comfort to the senses: Rosewater and Lauender, the one cordiall (as also the Violets, Borrage, & Buglas) the other retaining the spirits by the sence of smelling: both most durable for smell, both in flowers and water: you need not here raise your beds, as in the other Garden, because Summer sowings will not let too much wet annoy you. And these hearbs require more moisture: yet most you haue your beds diuided, that you may go betwixt to weede, & somewhat forme would be expected: To which it analleth, that you place your hearbs of biggest growth, by walles, or in borders, as Fenell, &c. and the lowest in the middell, as Daffron, Strawberryes, Onions, &c.

CHAP. VII.

Division of Hearbs.

Garden hearbs are innumerable, yet these are common and sufficient for our Country Housewives.

Hearbs of greatest growth.

Fenell, Angelica, Lantie, Hollyhock, Louage, Elly Clapane, French Pallowes, Lillies, French Poppie, Endiue, Succory, and Clarie.

The Country Housewives Garden.

Herbs of middle growth.

Burrage, Buglas, Parsley, Sweet Basil, Flower de luce, Stocke Gilliflowers, Wall-flowers, Anniseeds, Coriander, Feather-sewell, Perigolds, Oculus Christi, Longibeeffe, Alexanders, Carduus Benedictus.

Herbs of smallest growth.

Pansy, or Pansy-eale, Coast Marigold, Savery, Strawberries, Saffron, Lycorae, Paffadowdillies, Leekes, Chines, Chibals, Skerots, Onions, Watchelozs buttons, Daisies, Pennyroll.

Hitherto I haue onely reckoned by, & put in this rank, some hearbs. Their husbandry followe each in an Alphabetically order, the better to be found.

CHAP. VIII.

Husbandry of Herbs.

Alexanders are to be renued as Angelica. It is a timely Pot-herbe.

Angelica is renued with his seede, whereof he beareth plentie the second yeere, and so dyeth. You may remoue the roots the first yeere. The leaues distilled, with water soueraigne to expell paine from the stomacke. The roots dyed taken in the fall, stoppeth the pores against infections.

Annyseeds make their growth, and beareth seedes the first yeere, & dyeth as Coriander: It is good for opening the pipes, and it is vsed in Comfits.

Artichokes are renued by diuiding the roots into sets, in March, every third or fourth yeere. They require a severall vsage, and therefore a severall whole plot by themselves, especially considering they are plentiful of fruite much desired.

Burrage & Buglas, two cordials, renue themselves by seede yeerely, which is hard to be gathered: they are exceeding good Pot-herbs, good for Bees, and most comfortable for the heart and stomack, as Quinches and Wardens.

Camomile, set rootes in bankes and walkes. It is Sweet smelling, quallifying headache.

Cabbages require great rime, they seede the second yeere: sowe them in February, remoue them when the plants are an handfull long, set deepe and wet. Looke well in drought for the white

white Caterpillers moorme, the spawnes under the leafe closely: for every living Creature doth seek food and quiet shelter, and growing quicke, they draw to, and eate the heart: you may find them in a raine or dewie morning. It is a good Pothearbe, and of this Pearb called Cole, our Country Housewives give their pottage their name, and call them Caell.

Cardus Benedictus, or blessed thistle, seeds and dyes the first yeere, the excellent vertue thereof I referre to Herbals: for we are Gardiners, not Physicians.

Carrets are sowne late in Aprill or May, as Turneps, else they seede the first yeere, and then their roots are naught: the second yeere they dye, their rootes grow great, and require large roome.

Chibals or Chines have their rootes parted, as Garlick, Lillies, &c. and so at they set every third or fourth yeere: a good pot-hearbe opening, but euill for the eyes.

Clarie is sowne, it seeds the second yeere, and dyes. It is somewhat harsh in taste, a little in pottage is good, it strengthe-
neth the reiner.

Coast, Rootes parted make sets in March: it beares the second yeere: it is vser in Ale in May.

Coriander is for vsage and vses, much like Anniseeds.

Daffadownillies haue their rootes parted, and set once in three or foure yeere, or longer time. They flower timely, and after Midsummer, are scarcely seene. They are more for ornament, than vse, so are Daisies.

Daisy rootes parted and set, as Flower-deluce and Camomile, when you see them grow too thicke or decay. They be good to keepe by, and strengthen the edges of your borders, as Pinkes, they be red, white, and blue.

Ellycampane root is long lasting, as is the Louage, it seeds yeerely, you may diuide the root, and set the root, taken in Winter it is good (being dyed, powdered and drunke) to killitches.

Endiue and Succory are much like in nature, shape, and vse, they renew themselves by seed, as Fennell, and many other hearbs. You may remoue them before they put forth shanks, a good Pothearbe.

Fennell is renewed, either by the seeds (which it beareth the second

The Country Housewifes Garden.

second yeere, and so yeerely in great aboundance) so wne in the fall or Spring, or by diuiding one root into many Sets, as Artichoke, it is long of growth and life. You may remoue the root without. It is exceeding good for the eyes, distilled, or any other wile taken: it is used in dressing Vints for swarines, a very good Botheard, or for Sallets.

Petherfewle makes seed. Good against a shaking Fever, taken in a posset drinke fasting.

Flower-deluce, long lasting. Diuide his roots, and set: the rootes dyed haue a sweet smell.

Garlicke may be set an handfull distance, two inches deepe, in the edge of your beds. Part the heads into seuerall cloues, and euery cloue set in the hinder end of February, will increase to a great head before September: good for opening, euill for eyes: when the blade is long, fast two and two together, the heads will be bigger.

Hollyhocke riseth high, seedeth and dyeth: the chiefe ble I know is ornament.

Isope is reasonable long lasting: young rootes are good to set, slips better. A good Botheard.

Iuly-flowers, commonly called Gilly-flowers, or Cloue. Iuly-flowers (I call them so, because they blowe in Iuly) they haue the name of Cloues, of their sent. I may well call them the King of Flowers (except the Rose) & the best sort of them, are called Queene-Iuly-flowres. I haue of them nine or ten seuerall colours, and diuers of them as bigge as Roses: of all flowres (saue the Damask Rose) they are the most pleasant to sight and smell: they last not past three or foure yeeres without remoued. Take the slips (without shankes) and set any time, saue in extreme frost, but especially at Michael tide. Their ble is much in ornament, and comforting the spirits, by the fence of smelling.

Iuly-flowres of the Wall, or Wall Iuly-flowres, Wall-flowres, or Bee-flowres, or Winter Iuly-flowres, because growing in walles, euen in Winter, and good for Bees, will grow euen in stone walles, they will seeme dead in Summer, and yet reuiue in Winter. They yeeld seed plentifully, which you may sow at any time, or in any broken earth, especially on the top of a mudde wall, but moyst, you may set the root before it

It be brant, enery slip that is not flow'd, will take root, or crop him in Summer, and he will flower in Winter: but his winter seed is untimely. This and Palmes are exceeding good, and timely for Bees.

Leekes yeeld seed the second yeere, unremoned and die, but lesse you remoue them, vsuall to eate with salt and bread, as Onyons alwayes greene, good Pothearbe, euill for the eyes.

Lauender Spike would be remoued within seuen yeeres, or eight at the most. Slips twined as Hop and Sage, would take best at Michael tyde. This flower is good for Bees, most comfortable for smelling, except Roses: and kept dry, is as strong after a yeere, as when it is gathered. The water of this is comfortable.

White Lauender would be remoued sooner.

Lettice yeelds seed the first yeere, and dyes: sow betime, and if you would haue them Cabbage for Sallets, remoue them as you doe Cabbage. They are vsuall in Sallets, and the pot.

Lillies white and red, remoued once in thyes or foure yeeres their rootes yeeld many Sets, like the Garlick. Michael tide is the best: they grow high, after they get roote: these rootes are good to bryake a Byle, as are Mallowes and Sorrell.

Mallowes French, or gagged, the first or second yeere, seed plentifully: sow in March, or before, they are good for the housewifes pot, or to bryake a bunch.

Marigolds most commonly come of seed, you may remoue the Plants, when they be two inches long. The double Mart-gold, being as bigge as a little Rose, is good for thew. They are a good Pothearbe.

Oculus Christi, or Christs eye, seeds and dyes the first or second yeere: you may remoue the yong Plants, but seed is better: one of these seeds put into the eye, within thye or foure houres will gather a thicke skinne, cleere the eye, and bolt it selfe forth without hurt to the eye. A good Pot hearbe.

Onyons are sowne in February, they are gathered at Michael tide, and all the Summer long, for Sallets; as also yong Parsly, Sage, Chibals, Lettice, Sweet Sicilly, Fennell, &c. good alone, or with meate as Mutton, &c. for sauce, especially for the pot.

Parsly sow the first yeere, and vse the next yeere: it seedes
plen-

plentifully, an hearbe of much vse, as sweet Sicily is. The seed and roots are good against the Stone.

Parfneps require an whole plot, they be plentifull and common: sow them in February, the Kings (that is in the middle) seed broadest and reddest. Parfneps are sustenance for a strong stomake, not good for enill eyes: When they couer the earth in a drought, to tread the tops, make the rootes bigger.

Peny-royall, or Pudding Grass, creepes along the ground, like ground Ivie. It lasts long, like Daisies, because it puts and spreads dayly new rootes. Diuide, and remove the rootes, it hath a pleasant taste and smell, good for the pot, or hacket meate, or Paggas Pudding.

Pumpions: Set seeds with your finger, a finger deepe, late in March, and so soon as they appeare, enery night if you doubt frost, couer them, and water them continually out of a water-pot: they be very tender, their fruit is great and waterish.

French Poppy beareth a faire flower, and the Seed will make you sleepe.

Raddish is sauce for cloyed stomacks, as Capers, Olives, and Cucumbers, cast the seedes all Summer long here and there, and you shall haue them alwaies yong and fresh.

Rosemary, the grace of Herbs in England, in other Countries common. To set slips immediately after Lammes, is the surest way. Seeke some may proue well, so they be sowne in hot weather, some what moist, and good earth: for the Hearbe, though great, is neth and tender (as I take it) brought from hote Countries to vs in the cold North: set thinne. It becomes a Window well. The vse is much in meats, moze in Physick, most for Bees.

Rue, or Hearbe of Grace, continually greene, the slips are set. It lasts long as Rosemary, Solhernwood, &c. too strong for mine Housewifes pot, vnlesse she will bye Ale therewith, against the Plague: let him not seede, if you will haue him last.

Saffron, enery third yeere his rootes would be removed at Mid-Summer: for when all other hearbs grow most, it dyeth. It floweth at Michael tide, and groweth all Winter: keepe his flowers from birds in the morning, and gather the yelloiw (for they shap much like Lillies) dry, and after dry them: they

they be precious, expelling diseases from the heart & stomache.

Sauery seeds and dyes the first yeere, good for my Huswifes pot and pye.

Sage : set slips in May, and they grow aye : Let it not seed, it will last the longer. The vse is much and common. The Monkish Worterbe is tritum :

Cur moritur homo, cum salvia crescit in horto?

Skerots, the roots are set when they be parted, as Pyonie, and Flower-deluce at Michael-tide : the root is but small and very sweet. I know none other speciall vse but the Table.

Sweet Sicily, long lasting, pleasantly tasting, either the seed sowne, or the root parted, and remoued, makes increase, it is of like vse with Parsly.

Strawberries long lasting, set rootes at Michael-tide, or the spring, they be red, white and greene, and ripe, when they bee great and soft, some by Mid-summer with vs. The vse is : they will coole my Housewife well, if they bee put in Wine or Creame with Sugar.

Time, both seeds, slips and rootes are good. If it seed not, it will last thre or foure yeeres or more, it smelleth comfortably. It hath much vse : namely, in al cold meats, it is good for Bees.

Turnep is sowne. In the second yeere they beare plenty of seede : they require the same time of sowing that Carrets doe : they are sick of the same disease that Cabbages be. The roote increaseth much, it is most wholesome, if it be sowne in a good and well tempered earth : Soueraigne for eyes and Bees.

I reckon these hearbs onely, because I teach my Countrey Housewife, not skillfull Artists, and it should be an endlesse labour, and would make the matter tedious to reckon by, Landibeeffe, Stocke-Iuly-flowers, Charuall, Valerian, Go-to-bed-at-noone, Piony, Licoras, Tansie, Garden-mints, Germander, Centaurie, and a thousand such physicke Hearbs. Let her first grow cunning in this, and then she may enlarge her Garden, as her skill and abilitie increaseth. And to helpe her the more, I haue set her downe these obseruations.

CHAP. IX.

Generall Rules in Gardening.

In the South parts Gardening may be moze timely, & moze safely done, than with vs in Yorkeshire, because our ayze is not so favourable, nor our ground so good.

2 Secondly most seeds shakt, by turning the good earth, are renewed, their mother the earth keeping them in her bowels, till the Sunne their Father can reach them with his heat.

3 In setting hearbs, leaue no top moze then an handfull above the ground, nor moze than a foot vnder the earth.

4 Twine the rootes of those slippes you set, if they will abide it. Gilly-flowers are too tender.

5 Set moist, and so we dry.

6 Set slips without shankes at any time, except at Midsummer, and in frosts.

7 Seeding spoiles the most rootes, as drawing the heart and sap from the root.

8 Gather for the pot and medicines, hearbs tender and greens, the sap being in the top, but in winter the root is best.

9 All the hearbs in the Garden for flowers, would once in seven yeeres be renewed, or soundly watered with puddle water, except Rosemarie.

10 In all your Gardens and Dycharbs, bankes and seates of Camomile, Penny royall, Daisies and Violets, are seemely and comfortable.

11 These require whole plots: Artichokes, Cabbages, Turneps, Parsneps, Onyons, Carrets, and (if you will) Saffron, and Scerrets.

12 Gather all your seeds dead, ripe, and dry.

13 Lay no dung to the rootes of your hearbs, as vsually they doe: for dung not melted is too hot, euen for trees.

14 Thin setting and sowing (so the rootes stand not past a foot distance) is profitable, for the hearbs will like the better. Greater hearbs would haue moze distance.

15 Set and sow hearbs in their time of growth (except at Mid-

Midsummer, for then they are too too tender) but trees in their time of rest.

16 A good Housewife may, and will gather store of hearbs for the pot, about Lammes, and dry them, and pownd them, and in winter they will make good service.

Thus haue I lined out a Garden to our Countrey Housewives, and giuen them rules for common hearbs. If any of them (as sometimes they are) be knotty, I refer them to chap. 3. The skill and paines of weeding the Garden with weeding Weeding, knives of fingers, I referre to themselves, and their maides, willing them to take the opportunitie after a showre of raine: withall I aduise the Mistresse, either to be present her selfe, or to teach her maides to know hearbs from weeds.

A good note,

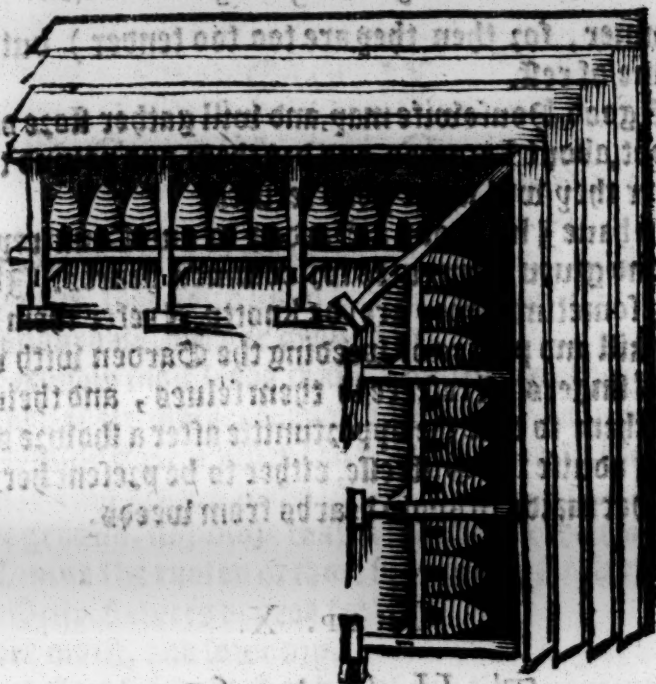
CHAP. X.

The Husbandry of Bees.

There remaineth one necessarie thing to bee prescribed, which in mine opinion makes as much for ornament as either Flowers, or for me, or cleanlinesse, and I am sure as commodious as any of, or all the rest which is Bees, well ordered. And I will not account yet any of my good Housewives, that wanteth either Bees or skillfulness about them. And though I know some haue written well and truly, and others more plentifully vpon this Theame: yet somewhat haue I learned by experience (being a Bee-master my selfe) which hitherto I cannot finde put into writing, for which I thinke our Housewives will count themselves beholding vnto me.

The first thing that a Gardiner about Bees must be careful for, is an house not staked and stoned abroad, Sub dio: for staked rot and reele, raine and weather eate your hives, and couers, and cold moost of all is hurtfull for your Bees. Therefore you must haue an house made along, a sure dry wall in your Garden, neere, or in your Orchard: for Bees loue Flowers and weas with their hearts.

Beehouse.



This is the forme, a frame standing on posts with a Floor (if you would haue it hold more Hives, two floozes boozed) laid on Bearers, and backe posts, covered over with boozes, slate-wise. Let the floozes be without holes or clefts, lest in casting time, the Bees lye out, and loyter. And though your Hives stand within an hand-brent the one of another, yet will Bees know their owne home. In this frame may your Bees stand dry and warme, especially if you make boozes like doores of windowes to shrowd them in Winter, as in an house: provided you leaue the Hives mouthes open. I my selfe haue devised such an house, and I finde that it keepes and strengthens my Bees much, and my Hives will last fire to one.

Hives.

M. Markam commendes Hives of wood. I discommend them not: but Straw Hives are in vse with vs, and I thinke with all the world, which I commend for nimblenes, closenesse, wannesse and drynesse. Bees loue no externall motions of dabling or such like. Sometimes occasion shall bee offered to lift and turne Hives, as shall appeare hereafter. One light entire hie of straw in that case is better, than one that is dabled, weighty and cumbersome. I wish every hie, for a keeping swaine, to hold thye pecks at least in measure. For too little Hives pro-

cure

cure Bees, in casting time, either to lye out, and loyter, or else to cast befoze they bee ripe and strong, and so make weak swarmes and untimely: Whereas if they haue roome sufficient, they ripen timely, and casting seasonably, are strong, and fit for labour presently. Neither would the hive be too too great, for then they loyter, and waste meat and time.

Your Bees delight in wood, for feeding, especially for casting: therefore want not an Orchard. A Mayes swarme is worth a Dares Foale: if they want wood, they be in danger of flying away. Any time befoze Midsummer is good, for casting and timely befoze Iuly is not evil. I much like M. Markarns opinion for hiving a swarme in combs of a dead or forsaken hive, so they be fresh and cleane. To thinke that a swarme of your owne, or others, will of it self come into such a thing, is a meere conceit, Experto crede Roberto. His lining with honey, is to no purpose, for the other Bees will eate it up. If your swarme knit in the top of a tree, as they will, if the wind beate them not to fall downe: let the fooke or ladder described in the Orchard, doe you service.

The lesse your Spelkes are, the lesse is the waste of your honey, and the more easily will they dye, when you take your Bees. Four Spelkes athwart, and one top spelke are sufficient. The Bees willassen their Combes to the Hive. A little honey is good: but if you want, Fennell will serve to rub your Hive withall. The Hive being dyest and ready spelt, rubb and the hole made for their passage (give no hole in the Hive, but a piece of wood heald, to save the hive and keep out mice) Make it your Bees, or the most of them (for all commonly you cannot get) the remainder will follow. Many use smoke, Pettes, &c. which I utterly dislike: for Bees love not to be molested. Ringing in time of casting is a more stanche, violent handling of them is simply vail, because Bees of all other creatures, love cleanlinesse and peace. Therefore handle them leisurely and quietly, and their Keeper whom they know, may doe with them, what he will, without hurt: Being hived at night, bring them to their seat. Set your Hives all of one yere together.

Signes of breeding, if they be strong.

1 They will avoid dead yong Bees and Doones.

2 They

They will sweat in the morning, till it runne from them; alwaies when they be strong. *Signes of casting.*

They will flye Doanes, by reason of heat.

The yong swarme will once or twice in some faire season, come forth mustering, as though they would cast, to proue themselves, and goe in againe.

The night before they cast, if you lay your eare to the Hives mouth, you shall heare two or three, but especially one above the rest, cry, Up; bp, bp; or, Tont, tont, tont, like a trumpet, sounding the alarme to the battell.

Which descending there is, of, and about the Passer-bee, and their degrees, orders, and government: but the truth in this point is rather imagined, then demonstrated. There are some conjectures of it, viz. we see in the Combes divers greater houses than the rest, and we heare commonly the night before they cast, sometimes one Bee, sometimes two, or more Bees, give a low and severall sound from the rest, and sometimes Bees of greater bodies than the common sort: but what of all this? I leane not on conjectures, but love to set downe that I know to be true, and leane these things to them that love to divine. Keepe none weake, for it is hazard, oftentimes with losse: Feeding will not helpe them: for being weake, they cannot come downe to meat, or if they come downe, they dye, because Bees weake cannot abide cold. If none of these, yet wil the other Bees being strong, smell the honey, and come and spoile, and kill them. Some helpe is in casting time, to put two weake swarmes together, or as M. Markam well saith: Let them not cast late, by raising them with wood or stone: but with lumps (say I.) An lumps is three or foure weathes, wrought as the hive, the same compasse, to raise the hive withall: but by experience in tryall, I have found out a better way by Clustering, for late or weake swarmes hitherto not found out of any that I know. What is this: After casting time, if I have any stocke proud, and hindered from timely casting, with former Winters povertie, or evill weather in casting time, with two handles & crookes, fitted for the purpose, I turne by that stock so pressed with Bees, and set it on the crosse, upon which so turned with the mouth upward, I place another empty hive

Catching.

Clustering.

hine well dressed, and spelt, into which without any labour, the Swarme that would not depart, and cast, will presently ascend, because the old Bees have this qualitie (as all other breeding creatures have) to expell the young, when they have brought them up. Where will the Swarme build as kindly, as if they had of themselves been cast. But bee sure you lay betwixt the bines some straight and cleanly sticke or stickes, or rather a board with holes, to keepe them asunder: otherwise they will loyne their woorkes together so fast, that they cannot be parted. If you so keepe them asunder at Michael-tide, if you like the weight of your swarme (so the goodnesse of swarmes is tried by weight) so caught, you may set it by for a stocke to keepe. Take heed in any case the combs be not broken, for then the other Bees will smell the honey, and spoyle them. This have I tried to be very profitable for the saving of Bees. The Instrument hath this forme. The great straight piece is wood, the rest are iron claspes and nayles, the claspes are loose in the Staples: Two men with two of these fastened to the Vine, will easily turne it by.



They gather not till July, for then they be discharged of their young, or else they are become now strong to labour, and now lay in flowers is strong and proud: by reason of time, and force of Sunne. And now also in the Month (and not before) the hearbs of greatest vigour put their Flowers; As Beanes, Fennell, Burrage, Rape, &c.

The most seasonable weather for them, is heat, & drought, because the nesh Beecan neither abide cold or wet: and Showres (which they well foresee) doe interrupt their labours, unless they fall on the night, and so they further them.

After casting time, you shall benefit your stocks much, if you helpe them to kill their Droanes, which by all probability and judgement, are an idle kinde of Bees, and wastefull. Some say they breed and have seen yong Droanes in taking their honey, which I know is true. But I am of opinion, that there are also Bees which have lost their Kings, and so being, as it were gelded, become idle and great. There is great use

Droanes.

of them: Deus, et natura nihil fecit frustra. They beate the bees, and cause them cast the sooner. They neuer come soo2th but when they be ouer beated. They neuer come home laden. After casting time, and when the Bees want meat, you shall see the labouring Bees fasten on them, two, thre, or foure at once, as if they were thienes to be led to the gallows, and killing them, they cast out, and draw them farre from home, as hateful enemies. Our Housewife, if she be the keeper of her owne bees (as she had need to be) may with her bare hand in y^e heate of the day, safely destroy them in the bines mouth. Some vse towards night, in a hot day, to set befoze the mouth of the bipe a thin horzd, with little holes, in at which the lesser bees may enter, but not the d2ganes. so that you may kill them at your pleasure.

Annoyan-
ces.

Snayles spoile them by night like thienes: they come so quietly, and are so fast, that the Bees feare them not. Looke early and late, especially in a raime or dewey evening or morning.

Spice are no lesse hurtfull, and the rather to bines of straw: and therefore coverings of straw draw them. They will in eyther at the mouth, or sheere themselves an hole. The remedie is good Cats, Kats-bane and watching.

The cleanly Bee hateth the smoke as poison, therefore let your Bees stand neerer your garden, than your B2lew-house or Kitchen.

They say Sparrowes & Swallows are enemies to Bees, but I see it not.

More bines perissh by winters cold, than by all other hurtes. For the bee is tender and nice, and onely liues in warme weather, and dyes in cold: And therefore let my Housewife bee perswaded, that a warme day house befoze described, is the chiefeest help she can make her bees against this, and many moze mischieses. Many vse against cold in winter, to stop by their bive close, and some set them in houses, perswading themselves, that thereby they relieue their bees. First, toiling and mousing is hurtfull. Secondly, in houses, going, knocking, & shaking is noysome. Thirdly, too much heat in a house is unnaturall for them: but lastly, and especially, Bees cannot abide to be stoppt close by. For at every warme season of the sun they re-
uiue,

uiue, and liuing eate, and eating muſt needs purge abroad, (in her honſe) the cleanly Bee will not purge her ſelfe. Iudge you what it is for any liuing creature, not to diſburden nature. Being thus by in calme ſeaſons, lay your eare to the hie, and you ſhall heare them yarme and yell, as to many hungred priſoners. Therefoze impound not your Bees, ſo profitable and free a creature.

Let none ſtand about three yeeres, eſſe the combes will be blacke and knotty, your honey will be thin and vncleanly: and if any coſt after three yeeres, it is ſuch as haue ſwarmes, and old Bees kept all together, which is great loſſe. Smoaking with ragges, roſin, or brimſtone, many uſe: ſome uſe drawing in a tub of cleane water, & the water well hzed, will be good botcher. Draw out your ſpelles immediately with a paire of pinchars, leſt the wood grow ſoft and ſwell, & ſo will not be drawne, then muſt you cut your hie.

Taking of Bees.

Let no fire come neere your hony. ſo fire ſofterneth the ware and doſſe, and makes them runne with the hony. Fire ſofterneth, weakeneth, and hindereth hony for purging. Breake your Combes ſmall (when the dead empty combes are parted from the loaden combes into a Sieue, hoze ouer a great bowle, or beſſell, with two ſtaues, and ſo let it runne two or three dayes. The ſooner you tunne it by, the better will it purge. Runne your ſwarne honey by it ſelfe, and that ſhall be your beſt. The elder your Vines are, the worſe is your honey.

Srayning honey.

Uſuall beſſels are of clay, but after wood be ſatiated with Honey (ſo it will leake at firſt: ſo Honey is maruellouſly ſearching, the thicke, and therefoze vertuous) I uſe it rather becauſe it will not breake ſo ſoone, with falls, froſts, or otherwiſe, and greater beſſels of clay will hardly laſt.

Veſſels.

When you uſe your honey, with a ſpoone take off the ſkin which it hath put by.

And it is worth the regard, that Bees thus uſed, if you haue but forty ſtocks, ſhall yeeld you more comodity clearly than forty acres of good ground. And thus much may ſuffice, to make good Houſewines lone and haue good Gardens and Bees.



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A MOST PROFITABLE

new Treatise, from approued experience of
the Art of propagating Plants : by
Simon Harward.

CHAP. I.

The Art of propagating Plants.



There are foure sorts of Planting, or propagating, as in laying of shootes or little branches, whiles they are yet tender in some pit made at their foote, as shall bee said hereafter, or vpon a little ladder or Basket of Earth, tyed to the bottome of the branch, or in boaring a Willow thozow, and putting the branch of the Tree into the hole, as shall be fully declared in the Chapter of Grafting. There are likewise seasons to propagate in, but the best is in the Spring, and March, when the Trees are in the flower, and doe begin to grow lusty. The young planted Stems or little Grafts must be propagated in the beginning of Winter, a foot deepe in the earth, and good manure mingled amongst the earth, which you shall cast forth of the pit, wherein you meane to propagate it, to tumble it in vpon it againe. In like manner your superduous Stems, or little Plants must be cut close by the earth, when as they grow about some small Impe, which we meane to propagate, for they would doe nothing but rot. For to propagate, you must digge the earth round about the tree, that so your rootes may be laid in a man-

2.

ner halfe bare. Afterward draw into length the pit on that side where you meane to propagate, and according as you perceive that the rootes will be best able to peele, and be governed in the same pit, to use them, and that with all gentlenesse, and close your Diens, in such sort, as that the weath which is in the place where it is grafted, may bee a little lower then the Diens of the new Wood, growing out of the earth, even so high as it possible may be. If the trees that you would propagate be somewhat thicke, and thereby the harder to ply, and somewhat stiffe to lay in the pit: then you may wet the stocks almost to the midst, betwixt the root and the weathing place, and so with gentle handling of it, bow downe into the pit the wood which the grafts haue put forth, and that in as round a compasse as you can, keeping you from breaking of it: afterward lay ouer the cut, with gummed Ware, or with grauell and sand.

CHAP. II.

Grafting in the Barks.

Grafting in the Barks, is used from mid-August, to the beginning of Winter, and also when the Westerne winde beginneth to blow, being from the 7. of February, unto the 11. of June. But there must care bee had, not to graffe in the barks in any rainy season, because it would wash away the matter of ioyning the one and the other together, and so hinder it.

Grafting in the barks, is used in the Summer time, from the end of May, untill August, as being the time when the trees are strong and lusty, and full of sap and leaues. To wit, in a hot Countrey, from the midst of June, unto the midst of July: but cold Countries, to the midst of August, after some small showres of Raine.

If the Summer be so exceeding dry, as that some trees doe withhold their sap, you must wait the time till it do returne.

Graft from the full of the Moone, untill the end of the old.

You may graft in a Cleft, without hauing regard to the Raine, for the sap will keepe it off.

You may graft from mid-August, to the beginning of November: Cowes dung with straw doth mightily preserve the graft.

It

It is better to graft in the evening, then the morning.

The furniture and tooles of a Grafter, are a Basket to lay his Grafts in, Clay, Crannell, Sand, or strong Earth, to draw over the plants clonen: Masse, Woollen clothes, barks of Willow to ioyne to the late things & earth be soze spoken, and to keepe them fast: Mizers to tye againe vpon y barke, to keepe them firme and fast: Summed Wax, to dresse and coner the ends and tops of the grafts newly cut, that so the raine and cold may not hurt them, neither yet the sap rising from belowe, be constrained to returne againe vnto the shootes. A little Sawe or hand-Sawe, to sawe off the stocke of the plants, a little Knife or Pen-knife to grasse, and to cut and sharpen the grafts, that so the barke may not pill nor be broken, which often cometh to passe when the graft is full of sap. You shall cut the grasse so long, as that it may fill the cleft of the plant, and therewithall it must be left thicker on the barke side, that so it may fill vp both the cleft and other incisions, as any need is to be made, which must be alwaies well ground, well burnished without all rust. Two wedges, the one broad for thicke trees, the other narrow for lesse and tender trees, both of them of box, or some other hard and smooth wood, or Steele, or of very hard iron, that so they may need lesse labour in making them sharpe.

A little hand-Bill to set the plants at more libertie, by cutting off superfluous boughs, held of Iron, Box, or Brazell.

CHAP. III.

Grafting in the cleft.

The manner of grafting in a cleft, to wit, the stock being clow'd, is proper not onely to trees, which are as great as mans legges or armes, but also to greater. It is true, that in as much as the trees cannot easily be clonen in their stocke, that therefore it is expedient to make incision in some one of their branches, and not in the maine body, as wee see to be practised in great Apple-trees, & great Pearre-trees, and as we haue already declared heretofore.

To graft in the cleft, you must make choise of a graft that is full of sap and ioyce, but it must not bee, but till from after Ianuarie untill March: And you must not thus graft in any tree

tree that is already budded, because a great part of the sypes & sap would be already mounted vp on high, and risen to the top, and there dispersed and scattered hither and thither, into euery sprigge and twigge, and vse nothing welcome to the graft.

6.

You must likewise be resolved not to gather yout graft the day you graft in, but ten or twelue dayes before: for otherwise, if you graft it new gathered, it will not bee able easily to incorporate it selfe with the body and stocke, where it shall bee grafted; because that some part of it will dry, and by this meanes will be a hinderance in the stocke to the rising vp of the sap, which it should commanerate vnto the graft, for the making of it to put forth. And whereas this dried part will fall a crumbling, and breaking thorow his rottennesse, it will cause to remaine a cankeritie, or hollow place in the stocke, which will bee an occasion of a like inconuenience to befall the graft. Moreover, the graft being new and tender, might easily be hurt of the bands, which are of necessitie to be tyed about the stocke, to keepe the graft firme and fast. And you must further see, that your plant was not of late remoued, but that it haue already fully taken root.

When you are minded to graft many grafts into one cleft, you must see that they be cut in the end all alike.

7.

See that the grafts be of one length, or not much differing, and it is enough, that they haue three or foure eylets without the wyench when the plant is once sawed, and lopped of all his small stiens and shootes round about, as also implied of all his branches, if it haue many: then you must leaue but two at the most, before you come to the cleauing of it: then put to your little saw, or your knife, or other edged tooles that is very sharpe, cleaue it quite thorow the middest, in gentle & soft sort: First, tying the stocke very sure, that so it may not cleaue further then is need: and then put to your wedges into the cleft, untill such time as you haue set in your grafts, and in cleauing of it, hold the knife with the one hand, and the tree with the other, to helpe to keepe it from cleauing too farre. Afterwards put in your wedge of Waxe or Brazill, or bone at the small end, that so you may the better take it out againe, when you haue set in your grafts.

8.

If the stocke be clouen, or the barke loosed too much from the

the wood: then cleane it do wne lower, and set your grafts in, and looke that their incision bee fit, and very lustily answerable to the cleft, and that the two saps, first, of the Plant and graft, be right and even set one against the other, and so handsomely fitted, as that there may not be the least appearance of any cut or cleft. For if they doe not thus iumpe one with another, they will neuer take one with another, because they cannot worke their seeming matter, and as it were cartilaginous glue in convenient sort or manner, to the gluing of their ioynts together. You must likewise beware, not to make your cleft overthwart the pitch, but somewhat aside.

The barke of your Plant beeing thicker then that of your Graft, you must set the graft so much the moze outwardly in the cleft, that so the two saps may in any case bee ioyned, and set right the one with the other: but the rinde of the Plant must be somewhat moze out, then that of the grafts on the cloven side.

To the end that you may not faile of this worke of imping, you must principally take heed, not to over-cleane the Stockes of your Trees. But befoze you widen the cleft of your wedges, binde, and goe about the Stocke with two or three turnes, and that with an Bzier, close drawn together, underneath the same place, where you would haue your cleft to end; that so your Stocke cleane not too farre, which is a very vsuall cause of the miscarrying of grafts, inasmuch as hereby the cleft standeth so wide and open, as that it cannot be shut, and so not grow together againe; but in the meane time spendeth it selfe, & breatheth out all his life in that place, which is the cause that the Stocke and the Graft are both spilt. And this falleth out most often in Plum-trees, and branches of trees. You must be careful so to ioyne the rinds of your Grafts, and Plants, that nothing may continue open, to the end that the wind, moisture of the clay or Raine, running vpon the grafted place, do not get in: when the Plant cleaueth very straight, there is not any danger nor hardnesse in sloping downe the Graft. If you leane it somewhat vneuen, or rough in some places, so that the saps both of the one and of the other may the better grow, and be glued together, when your grafts are once well ioyned to your Plants, draw out your Wedges very softly, lest you dis-

place them againe, you may leave there within the cleft some small end of a wedge of greene wood, cutting it very close with the head of the Stocke: Some cast glue into the cleft, some Sugar, and some gummed Ware.

11.

If the Stocke of the Plant whereupon you intend to graft, be not so thicke as your graft, you shall graft it after the fashion of a Goates foot, make a cleft in the Stocke of the Plant, not direct, but byas, and that smooth and even, not rough: then apply and make fast thereto, the graft withall his Bark on, and answering to the barke of the Plant. This being done, couer the place with the fat earth and mosse of the Woods tyed together with a strong band: Sticke a pole of Wood by it, to keepe it stedfast.

CHAP. IIII.

Grafting like a Scutcheon.

In grafting after the manner of a Scutcheon, you shall not vary nor differ much from that of the Flute or Pipe, save onely that the Scutcheon-like graft, hauing one eyelet, as the other hath yet the wood of the tree whereupon the Scutcheon-like graft is grafted, hath not any knob, or budde, as the wood whereupon the graft is grafted, after the manner of a pipe.

12.

In Summer when the trees are well replenished with sap, and that their new shoots begin to grow some-what hard, you shall take a shoot at the end of the chiefe branches of some noble and reclaimed tree, whereof you would faine haue some fruit, and not many of his old stozes or wood, and from thence raise a good eyelet, the saple and all thereof to make your graft. But when you choose, take the thickest, and grossest, diuide the saple in the middelt, befoze you doe any thing else, casting away the leafe (if it be not a Peare-plum-tree: soz that would haue two or three leaues) without remouing any moze of the said saple: after ward with the point of a sharpe knife, cut off the Barke of the said shoot, the patterne of a shield, of the length of a nayle.

13.

In which there is onely one eyelet higher then the middelt together, with the residue of the saple which you left behinde: and soz the lifting vp of the said graft in Scutcheon, after that you haue cut the barke of the shoot round about, without cutting

ting of the wood within, you must take it gently with your thumbe, & in putting it away you must presse vpon the wood from which you pull it, that so you may bring the bud and all away together with the Scutcheon: for if you leane it behinde with the wood, then were the Scutcheon nothing worth. You shall finde out if the Scutcheon be nothing worth, if looking within when it is pulled away from the wood of the same sate, you finde it to haue a hole within, but more manifestly, if the bud doe stay behind in the Wood, which ought to haue been in the Scutcheon.

Thus your Scutcheon being well raised and taken off, hold it a little by the tayle betwixt your lips, without wetting of it, euen vntill you haue cut the Marke of the tree where you would graft it, and looke that it be cut without any wounding of the wood within, after the manner of a crutch, but somewhat longer then the Scutcheon y you haue to set in it, and in no place cutting the wood within; after you haue made incision, you must open it, and make it gape wide on both sides, but in all manner of gentle handling, and that with little Siz-ers of bone, and separating the wood and the barke a little within, euen so much as your Scutcheon is in length and breadth: you must take heed that in doing hereof, you doe not hurt the Marke.

This done, take your Scutcheon by the end, and your taile which you haue left remaining, and put into your incision made in your tree, lifting vp softly your two sides of the incision with your said Siz-ers of bone, and cause the said Scutcheon to lye as close as may be, with the wood of the tree, being cut, as aforesaid, in waying a little vpon the end of your rinde: so cut and let the vpper part of your Scutcheon lye close vnto the vpper end of your incision, or barke of your said tree: afterward binde your Scutcheon about with a band of Hempe, as thicke as a pen of a quill, more or lesse, according as your tree is small or great, taking the same Hempe in the middelt, to the end that either part of it may perfoyme a like serutice; and weathring and binding of the said Scutcheon into the incision of the Tree, and it must not be tyed too strait, for that would keepe it from taking the ioyning of the one sap to the other, being hindred thereby, and neither the Scut-

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15.

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cheon, no; yet the Vempe must be moist, or wet: and the moze fastly to binde them together, begin at the backe side of the Tree, right ouer against the middell of the incision, and from thence come so;ward to ioyne them besoze, aboue the eylet and tayle of the Scutcheon, crossing your band of Vempe, so oft as the two ends meet, and from hence returning backe againe, come about and tie it likewise vnderneath the eylets: and thus cast about your band still backward and so;ward, vntill the whole cleft of the incision bee couered aboue and below with the said Vempe, the eylet onely excepted, and his tayle which must not be couered at all; his tayle will fall away one part after another, and that shortly after the ingrafting, if so bee that the Scutcheon will take. Leane your trees and Scutcheons thus bound, so; the space of one moneth, and the thicker, a great deale longer time. Afterward looke them ouer, and if you perceine thē to grow together, vntie them, or at the leastwise cut the Vempe behinde them, and leane them vncovered. Cut also your bzanch two or thzee fingers aboue that, so the impe may prosper the better: and thus let them remaine till after Winter, about the moneth of March, and Aprill.

18.

If you perceine that your bud of your Scutcheon do swell and come so;ward: then cut off the tree thzee fingers or thereabouts, aboue the Scutcheon: so; if it bee cut off too neere the Scutcheon, at such time as it putteth so;th his first blossome, it would be a means greatly to hinder the flowring of it, and cause also that it should not thzue and prosper so well after that one yeere is past, and that the shoote beginneth to bee strong: beginning to put so;th the second bud and blossome, you must goe so;ward to cut off in byas-wise the thzee fingers in the top of the tree, which you left there, when you cut it in the yeere going besoze, as hath been said.

19.

When your shoote shall haue put so;th a great deale of length, you must sticke downe there, euen hard iopned thereunto, little stakes, tying them together very gently and easily; and these shall stay your shootes and prop them vp, letting the winde from doing any harme vnto them. Thus you may graft white Roses in red, and red in white. Thus you may graft two or thzee scutcheons: provided that they bee all of one side: so; they will not be set equally together in height, because

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because then they would bee all stamplings, neither would they be directly one ouer another; for the lower would stay the rising bp of the sap of the tree, and so those above should consume in penurie, and vndergoe the aforesaid inconvenience. You must note, that the scutcheon which is gathered from the Sien of a tree whose fruite is sowze, must be cut in square forme, and not in the plaine fashion of a scutcheon. It is ordinarie to graffe the sweet Quince tree, bassard Peach tree, Appicock tree, Zulube tree, sowze Cherry tree, sweet cherry tree, & Chestnut tree, after this fashion, howbeit they might be grafted in the cleft moze easily, & moze profitably; although diuers be of contrary opinion, as thus best: Take the grafts of sweet Quince tree, and bassard Peach tree, of the fairest wood, and best sed that you can finde, growing vpon the wood of two yeeres old, because the wood is not so firme nez solid as the others: and you shall graffe them vpon small Plum tree stockes, being of the thickeesse of ones thumbe; these you shall cut after the fashion of a Goates foot: you shall not goe about to make the cleft of any moze sides then one, being about a foote high from the ground; you must open it with your small wedge: and being thus grafted, it will seeme to you that it is open but of one side; afterward you shall wrap it bp with a little Masse, putting thereto some gummed War, oz clay, and binde it bp with Dziers to keepe it surer, because the stocke is not strong inough it selfe to hold it, and you shall furnish it euery manner of way as others are dealt withall: this is most profitable.

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The time of grafting.

All moneths are good to graft in, (the moneth of October and Nouember onely excepted) But commonly, graft at that time of the winter, when sap beginneth to arise.

In a cold Countrey graft later, and in a warme countrey earlier.

The best time generall is from the first of February, untill the first of May.

The grafts must alwayes bee gathered, in the old of the Moone.

For grafts, choose shootes of a yeere old, oz at the furthest two yeeres old.

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If you must carry grafts farre, picke them into a Turnep newly gathered, or lay earth about the ends.

If you set Stones of Plummes, Almonds, Nuts, or Peaches: First let them lye a little in the Sunne, and then keepe them in Milke or Water, thzee or foure dayes befoze you put them into the earth.

Dry the kernels of Hippings, and sow them in the end of Nouember.

The Stone of a Plum-tree must be set a foot deepe in Nouember, or February.

The Date Stone must be set the great end downwards, two cubits deepe in the earth, in a place enriched with dung.

The Peach Stone would be set presently after the Fruit is eaten, some quantitie of the flesh of the Peach remaining about the Stone.

If you will haue it to be excellent, graft it afterward vpon an Almond tree.

The little Shiens of Cherry-trees, grown thick with haire, rots, and those also which doe grow vp from the rootes of the great Cherry-trees, being remoued, doe grow better and sooner then they which come of Stones: but they must bee remoued and planted while they are but two or thzee yeeres old, the branches must be lopped.

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THE HUSBAND-MANS FRUITFULL ORCHARD.

For the true ordering of all sorts of fruits in their due seasons ; and how double increase commeth by care in gathering yeere after yeere : as also the best way of carriage by Land or by Water : With their preservation for longest continuance.



If all Stone Fruit, Cherries are the first to be gathered: of which, though we reckon foure sorts ; English, Flemish, Gascoyne & Black, yet are they reduced to two, the early, and the ordinarie : the early are those whose grafts came first from France and Flanders, and are now ripe with vs in May : the ordinarie is our owne naturall Cherry, and is not ripe before June; they must be carefully kept from Birds, either with nets, noise, or other industry.

They are not all ripe at once, nor may be gathered at once, therefore with a light Ladder, made to stand of it selfe, without hurting the boughes, mount to the tree, and with a gathering hooke, gather those which be full ripe, and put them into your Cherry-pot, or hybze hanging by your side, or upon any bough you please, and be sure to breake no stalks, but that the cherry hangs by ; and pull them gently, lay them downe tenderly, and handle them as little as you can.

For the conueyance or postage of Cherries, they are best To carry
to be carried in broad Baskets like Sines, with smooth peel- Cherries.
ding.

The Husband-mans fruitfull Orchard.

ding bottomes, onely two broad Laths going along the bottome: and if you doe transport them by Ship, or Boat, let not the Bines be fill'd to the top, lest setting one vpon another, you bruise and hurt the Cherries: if you carry by horsebacke, then Panniers well lined with Fearne, and packt full and close is the best and safest way.

Other stone fruit.

Now for y^e gathering of all other stone-fruit, as Pertarines, Apricocks, Peaches, Pearre-plummes, Damsons, Bullas, and such like, although in their senerall kindes, they seeme not to be ripe at once on one tree: yet when any is ready to drop from the tree, though the other seeme hard, yet they may also be gathered, for they haue receiued the full substance the tree can giue them; and therefore the day being faire, and the dew drawne away; set vp your Ladder, and as you gathered your Cherries, so gather them: onely in the bottomes of your large Bines, where you part them, you shall lay Nettles, and likewise in the top, for that will helpe to ripen those that are most vnready.

Gathering of Peares.

In gathering Peares, are three things obserued; to gather for expence, for transportation, or to sell to the Apothecarie. If for expence, and your owne vse, then gather them as soone as they change, and are as it were halfe ripe, and no moze but those which are changed, letting the rest hang till they change also: for thus they will ripen kindly, and not rot so soone, as if they were full ripe at the gathering. But if your Peares be to be transported farre either by Land or Water, then pull one from the tree, and cut it in the middle, and if you finde it hollow about the choare, and the kernell a large space to lye in: although no Pearre be ready to drop from the tree, yet then they may be gathered, & then laying them on a heape one vpon another, as of necessitie they must be for transportation, they will ripen of themselves, and eate kindly: but gathered before, they will wither, shrink and eate rough, losing not onely their taste, but beauty. Now for the manner of gathering; albeit some climbe into the trees by the boughes, and some by Ladder, yet both is amisse: the best way is with the Ladder before spoken of, which standeth of it selfe, and with a basket and a line, which being full, you must gently let down, and keeping the String still in your hand, being emptied, draw it vp againe,

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again, and so finish your labour, without troubling your selfe, or hurting the tree.

Now touching the gathering of Apples, it is to bee done according to the ripening of the fruit; your Summer Apples first, and the winter after. For Summer Fruit, when it is ripe, some will drop from the tree, and birds will bee picking at them: But if you cut one of the greenest, and finde it as was shew'd you before of the Pearre: then you may gather them, and in the house they will come to their ripenesse and perfection. For your Winter fruit, you shall know the ripenesse by the obseruation before shewed; but it must be gathered in a faire, Sunny, and dry day, in the wayne of the Moone, and no winde in the East, also after the dew is gone away: for the least wet or moisture will make them subiect to rot and mill-dew: also you must haue an apzon to gather in, and to empty into the great baskets, and a hooke to draw the boughs vnto you, which you cannot reach with your hands at ease: the apzon is to be an ell enery way, loopt vp to your girdle, so as it may serue for either hand without any trouble: and when it is full, vnloose one of your loopes, and empty it gently into the great Basket, for in thrawing them downe roughly, their owne stalkes may prick them; and those which are prickt, will euer rot. Again, you must gather your fruit cleane without Leanes or Bzunts, because the one hurts the tree, for enery bzunt would be a stalke for fruit to grow vpon: the other hurts the fruit by bzussing, and pricking it as it is laid together, and there is nothing sooner rotteth fruit, then the greene and withered leanes lying amongst them; neither must you gather them without any stalke at all: for such fruit will begin to rot where the stalke stood.

Gathering
of Apples.

For such fruit as falleth from the trees, and are not gathered, they must not be laid with the gathered fruit: and of fallings there are two sorts; one that falls through ripenesse, and they are best, and may be kept to bake or roast: the other wind-falls, and before they are ripe: and they must bee spent as they are gathered, or else they will wither and come to nothing: and therefore it is not good by any meanes to beat downe fruit with Boales, or to carry them in Carts loose and logging, or in sacks where they may be bzussed.

To vse the
fallings.

D

When

**Carriage of
fruit.**

When your fruit is gathered, you shall lay them in deepe Baskets of Wicker, which will containe foure or five bushels, and so betwene two men, carry them to your Apple Loft, and in shooting or laying them downe, be very carefull that it bee done with all gentlenesse, and leasure, laying every sort of fruit severall by it selfe: but if there be want of roome, having so many sorts that you cannot lay them severally, then such some fruit as is neere in taste and colour, and of winter fruit, such as will taste alike, may, if need require, be layd together, and in time you may separate them, as shall bee shewed hereafter. But if your fruit bee gathered faire from your Apple Loft, then must the bottomes of your Baskets be lined with greene Ferne, and draw the stubbozne ends of the same through the Basket, that none but the soft lease may touch the fruit, and likewise couer the tops of the baskets with Ferne also, and draw small cord over it, that the Ferne may not fall away, nor the fruit scatter out, or fogge by and be stone: and thus you may carry fruit by Land or by Water, by Boat, or Cart, as farre as you please: and the Ferne doth not onely keepe them from bruising, but also ripens them, especially Peares. When your fruit is brought to your Apple Loft or store-house, if you finde them not ripened enough, then lay them in thicker heapes upon Ferne, and couer them with Ferne also: and when they are neere ripe, then uncover them, and make the heapes thinner, so as the ayre may passe thorow them: and if you will not hasten the ripening of them, then lay them on the bare boozds without any Ferne at all. Now for Winter, or long lasting Peares, they may be packt either in Ferne or Straw, and carried whither you please; and being come to the journeyes end, must be laid upon sweet straw; but beware the roome bee not too warme, nor windie, and too cold, for both are hurtfull: but in a temperate place, where they may have ayre, but not too much.

**Of War-
dens.**

Wardens are to be gathered, carried, packt, & laid as winter Peares are.

Of Medlers.

Medlers are to be gathered about Michaelmas, after a frost hath toucht them; at which time they are in their full growth, and will then be dropping from the tree, but neuer ripe upon the

the

The Husband-mans fruitfull Orchard.

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the tree. When they are gathered, they must be layd in a basket, sine, barrell, or any such cask, & wrapt about with woollē cloathes, vnder, ouer, and on all sides, and also some waight laid vpon them, with a boord betweene: so except they bee brought into a heate, they will neuer ripen kindly or taste well. Now when they haue laine till you thinke some of them bee ripe, the ripest, still as they ripen, must be taken from the rest: therfore sorte them out into another sine or basket leasurely, that so you may well finde them that be ripest, letting the hard one fall into the other basket, and those which bee ripe laid aside: the other that be halfe ripe, seuer also into a third sine or basket: so if the ripe, and halfe ripe be kept together, the one will be mouldy, befoze the other be ripe: And thus doe, till al be thoroughly ripe.

Quinces should not bee laid with other fruite; so the sent Of Quinces is offensive both to other fruite, and to those that keepe the fruit or come amongst them: therfore lay them by themselves vpon sweet strawe, where they may haue ayre enough: they must be packt like Medlers, and gathered with Medlers.

Apples must be packt in wheate or Rye straw, & in maunds To packe or baskets lined with the same, and being gently handled, will Apples. ripen with such packing and lying together. If severall sorts of apples be packt in one maund or basket, then between euery sort, lay sweet strawe of a pretty thicknes.

Apples must not be sorted out, but with care and leasure: Emptying first, the straw pickt cleane from them, and then gently take and laying out euery seuerall sort, and place them by themselves: but if Apples. so want of roome you must mixe the sorts together, then lay those together that are of equall lasting; but if they haue all one taste, then they need no separation. Apples that are not of like colours should not be laid together, and if any such bee mingled, let it be amended, and those which are first ripe, let them be first spent; and to that end, lay those apples together, that are of one time of ripening: and thus you must vse Pippins also, yet will they indure bruises better then other fruite, and whilst they are Greene will heale one another.

Pippins, though they grow of one tree, and in one ground, Difference yet some will last better then other some, and some will bee in Fruit. bigger then others of the same kinde, according as they haue

The Husband-mans fruitfull Orchard.

haue more or lesse of the sun, or more or lesse of the droppings of the trees or vpper branches: therefore let euery one make most of that fruite which is fairest, & longest lasting. Again, the largenesse & goodnes of fruite consists in y^e age of the tree: for as the tree increaseth, so the fruite increaseth in bignesse, beauty, taste and firmnes: & otherwise, as it decreaseth.

Transport-
ing fruit by
water.

If you be to transport your fruite farre by water, then provide some v^z hogges-heads or barrells, and packe in your apples, one by one with your hand, that no empty place may be left, to occasion sogging; and you must line your bestell at both ends with fine sweet straw; but not the sides, to annoyde heate: and you must boze a dozen holes at either end, to receiue ayre so much the better; and by no meanes let them take wet. Some vse, that transport beyond seas, to shut the fruite vnder hatches vpon straw: but it is not so good, if caske may be gotten.

When not
to trasport
fruite.

It is not good to transport fruite in March, when the wind blowes bitterly, nor in frosty weather, neither in the extreme heate of Summer.

To conuay
small store
of fruite.

If the quantittie be small you would carry, then you may carry them in Dossers or Banniers, provided they be euer filled close, and that Cherries and Peares be lined with greene Fierne, and Apples with sweet straw; and that, but at the bottomes and tops, not on the sides.

Roomes for
fruit.

Winter fruite must lye neither too hot, nor too cold; too close, nor too open: for all are offensive. A lowe roome or Celler that is sweet, and either boorded or paved, and not too close, is good, from Christmas till March: and roomes that are seeled ouer head, and from the ground, are good from March till May: then the Celler againe, from May till Michaelmas. The apple loft would be seeled or boorded, which if it want, then take the longest Rye straw, and raise it against y^e walls, to make a fence as high as the fruite lieth; & let it be no thicker then to keepe the fruite from the wall, which being moyst, may doe hurt, or if not moyst, then the dust is offensive.

Sorting of
Fruit.

There are some fruit which will last but untill All-hallow-tide: they must be laid by themselves; then those which will last till Christmas, by themselves: then those which will last till it be Candlemas, by themselves: those which will last till

Shroue

Shronetide, by themselves: & Pippins, Apple-Johns, Peare-maines, and winter-Russetings, which will last all the yeere, by themselves.

Now if you spy any rotten fruit in your heapes, pick them out, and with a Trey for the purpose, see you turne the heapes over, and leaue not a tainted Apple in them, biniding the hardest by themselves, and the broken skinned by themselves to be first spent, and the rotten ones to be cast away; and ever as you turne them, and picke them, vnder-lay them with fresh straw: thus shall you keepe them safe for your vse, which otherwise would rot suddenly.

Pippins, John-Apples, Peare-maines, and such like long-lasting fruit, need not bee turned till the weeke before Christmas stirring mas, vnlesse they be mixt with other of a riper kind, or that the fallings be also with them, or much of the first straw left amongst them: the next time of turning is at Shrone-tide, and after that, once a moneth till Whitson-tide; and after that, once a fortnight; and ever in the turning, lay your heapes lower and lower, and your straw very thinne: provided you doe none of this labour in any great frost, except it bee in a close Celler. At euery thawe, all fruit is moist, and then they must not be touched; neither in rainy weather, for then they will be danke also: and therefore at such seasons it is good to set open your windowes, and doores, that the ayre may haue free passage to dry them, as at nine of the clocke in the fore-noone, and foure in the afternoone in Winter; and at sixe in the fore-noone, and at eight at night in Summer: onely in March, open not your windowes at all.

All lasting fruit, after the middest of May, begin to wither, because then they ware dry, and the moisture gone, which made them looke plump: they must needs wither, and bee smaller; and nature decaying, they must needs rot. And thus much touching the ordering of fruits.

Shruieling
of fruit.

FINIS.

THE Booke of Bees, called the *feminine Monarchy*, written heretofore by M^r Charles Butler, and now so much desired, shall shortly be set forth againe, corrected and augmented by the Authors further experience.



CAVELARICE
OR
The Tracconer,

Contayning the Arte and Secrets
which belong to Ambling Horses, and
how that pace is to be taught to any
Horse whatsoever.

The fourth Booke.



LONDON

Printed for *Ed. White*, and are to be solde at his shop
nere the little North doore of Saint Pauls
Church at the signe of the Gun.

1607.



373526



To the Right Honorable and moste noble
and mightie Lord Thomas Howard Earle of
Arundel and Surrey.



Here is nothing (most noble & mighty Lord)
which hath more incited me to this weary la-
bour (which I hope I haue to good purpose
effected) then the grace which I haue noted
both your noble selfe and other princes of
your ranke liberally bestowe vpon the Arte of horsemanshipp
both by your owne practise and the incouragement of others,
which doth not only assure me that no peace shal make the glo-
rie of warre neglected, but doth also make me hope to liue to
see in this nation as famous a nurserie of horsemen and hor-
ses, as euer hath beene boasted in Italic or Naples, and
though my boldnesse in darring to present my ruder skill
to your honorable iudgement may iustly be challenged to haue
no garments but a naked boldenes yet the loue I am bound to
beare to that moste honorable house (into which you haue now
moste happily planted your selfe) I hope wil be both my defence
and protection by which I knowe you will both take
delight to pardon, and my selfe be proud to
esteeme my selfe your srruant.

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Geruase Markham.



To all those which loue their ease
in trauelling.

Amongst all the partes or members into which the art of Horsemanship is deuided, there is none so generally followed, or hath got more professors to defend it then this arte of ambling, and yet is there no part of horsemanship more misgouerned or vildely handled by vnskilful workmen, through whome, there is not only multitudes of Horses spoyled & made in seruiceable, but also a great company of skilfull horsemen which knowe the true vse of Art, obscurd and kept vnder by the vaine boastes of most ignorant impostors, which to preuent and that euen common sence may know how to make the best election, I haue in this treatise following, set downe the rules both of true arte and false practise, reconciling them so together with the strength of my best reasons, that I doubt not but they wil giue to any peaceable minde a full satisfaction, in which if any man finde profit, it is the thing I onely wish them, and if they vouchsafe me thanks, it is enough for my labour, And so wishing you all the ease that can be coupled to labour, I leaue you to your owne thoughts of me and of my workes. Farwell.

G. M.

THE
C A V E L A R I C E :

The fourth Booke.

C H A P. I.

Of ambling in generall, and of the uses and commodities thereof.

I did some fewe yeares agoe, partly to giue the world a little taste of that knowledge, which manye good horlemen had neglected in their writings, and partly to shew a long absent freind the remembrace of my loue, writ a little sleight treatise touching the making of horses to amble, which because I haue found by manye of my worthie friendes gently accepted, albe the breuitie & obscuritie might well haue beene controlled; I thought it not amisse in this booke to demonstrate the whole art in as large and ample characters as is fit for the vnderstanding both of the better or more duller spirit, wherefore first to speake of ambling in generall, it is that smoothe & easie pace which the labour and industrie of an ingeni-

ous braine hath found out to relieue the aged, sick impotent and diseased persons, to make women vndertake iourneying, and so by their community to grace societie; to make greate men by the ease of trauell more willing to thrust theselues into the offices of the commō wealth, & to do the poor both relief & seruice, it makes him whom necessitie or (as the prouerb is) whome the deuill driues, not to be vext with two torments a troubled minde and a tormented body, to conclude, ambling was found out for the generall ease of the whole world, as long as there is eyther pleasure, comerce or trade amongst people.

Now for the maner of the motion, & the difference betwixt it, & trotting, it cannot be described more plainly then I haue set down in my former treatise which is that, it is the taking vp of both the legs together vppon one side, & so carrying them smoothly along, to set them downe vpon the ground euen together, and in that motion he must lift and winde vp his forefoot somewhat hye from the ground, but his hinder foot he must no more but take from the ground, and as it were sweep it close by the earth. Now by taking vp of both his legs together vpon one side, I meane he must take vp his right forefoote, and his left hinder foote, For as in the contrarie pace when a horse trots, he takes vp his feet as the *Italian* saies *Trauat- to* which is crosse wise, as the left hinder foot & the right forefoot, or the left forefoot, & the right hinder foot; & in that motion must lift vp his hinder foot to the full height of his forefoote presenting a kinde of gallantrie or vaulting pride in his pace, so this ambling motion in his smoothe stealing away, & as it were with a soft & tender touching of the ground, carries his burthen away gently without shaking, For as if you preciselye marke a horse when he trots vnder a man, you shall see that the taking

The fourth Booke.

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vp of his legges crosse wise, doth likewise aduaunce the mans bodie crosse wise, as thus: the Horse lifting from the ground his right forefoote, and his left hinder foote, rayleth with them the mans right thighe and his left buttocke, and then setting them downe together, giues as it were a kinde of iumpe to the mans whole bodie, and the higher such a horse takes vp his hinder foote the harder is his pace, for indeede it is onely the taking vp of the hinder foote, which makes the pace hard or easie, whence it comes that trotting horses which take their hinder feete gentlye, and but a little way from the ground, and so set them downe tenderly are cald easie trotting horses: so ambling horses taking both their legges vppe together of one side, as the right forefoote, and the right hinder foote, doe in their motion not lift vp but carrie as it were in a dyrect line, the mans right thighe, and his right buttocke, and so setting downe his feete gently, giue the mā neither iumpe nor other distemper, but following on with his left feete likewise, carries the mans whole body away in an euen smoothnes. Now when a horse eyther for want of true teaching, or by some other naurall custome, takes vp his hinder feete in his amble eyther higher then he should doe, or sets them downe harder then hee should doe, which you shall know by the wauing or shaking of the neather part of his taile (for when a horse goes smoothe & right, his taile wil hang straight & comelye): the such horses are said to roule in their pace, to be rough and vneasie amblers. Now for the first original or beginning of ambling. *Plinie* writes it came from that parte of the coast of *Spaine*, which we call *Galicia*, where (saith he) Horses doe amble naturally, and that other men & other nations frō the imitation of them (finding the commoditie of such ease in long & tedious iourneys (began the

of compelling Horses to amble with a certaine deuise made of cordes and lines fettred and bound about horses feete, from whence I gather this, that doubtles the tramel of which I am to speake more largely hereafter, was the first and most auncientest inuention that euer was found out for the making of horses to amble, and what other deuises or wittie secondings haue since those times issued from mens braines or labors, to bring this worke to passe by any other method, I verily imagine to haue their beginnings from this, as the very fountaine from whence other men draw their riuers.

Now that the horses of *Galicia* doe naturally amble, or that any other horse whatsoeuer doth naturally amble, as in my former small treatise, so in this I differ in the opiniō, and thinke as therein I manifest, that where foales amble, there is either some imperfection of strength, or some casual mischance, which did alter the first determination of nature: for it is most certaine, that what horse soeuer doth amble of himselfe without either instruction or compulsion, hath either weaknesse in his bodie, or imperfection in his spirit; so that wanting either abilitie to raise his bodie aloft forcibly, or spirit to thrust out his naturall pride gallantly, he is forced to bring his feete to this smooth and humble passage.

Now of ambles there be two sorts, a thorow amble, & a broken amble, or a certaine amble, & incertaine amble, the thorow or certaine amble is that which is contained in thorow and certaine strides where the horse passes his feete forth at the length smoothly, certainly, and with deliberation in short space, and with few paces passing ouer a good quantitie of ground, carying his burthen iust euen and without trouble; and this amble is that which appertaines both to those horses which wee call naturall
amblers,

amblers, & also to those horses which being of coole and temperate dispositions, are by arte and industrie brought to be more perfite in ambling, then those which we say haue it by nature.

The broken or incertaine amble is that which is contained within the compasse of the selfe same motion that the certaine amble is; onely it is done in short, quicke, and busie strides, a horse taking vp his feet both of one side so thicke and roundly together, that a mans eie cannot say, that his feet are downe before they bee vp againe, with many steps, & in a long time going but a litle way, which of some horsemen is called a traine, or racke, and it is neuer to be seene either in foales, vnriden horses, or horses that are of any coolnesse or sobrietie in iourneying, but for the most part it is euer in hot frantick final naggs, which trotting exceeding well; are compelled to amble by some disorderly compulsion. It many times comes to horses by ouer-riding them; so that through wearinesse not being able to aduaunce their bodies so lustilye as in their best strength they come to this shuffling & broken incertaine pace, which is neither amble nor trot, but a mixture of both, as taking his time keeping from trotting; and his motion of legges from ambling, and so compound this which is called a traine or racking.

Now for the horse of *Galicia*, that they are more subiect to this pace of ambling then any other horses bred in *Spain*, I am easily induced to beleue it, because it being the coldest and most barraine part of that continent, must by good consequence bring the weakest and worst horses, so that wanting both the heat of the Sunne, and the nourishing benefits which other races haue, out of their want of strength they fall to the pace of ambling: & this besides we know by experience, that euen the best bred *Jennets* in all

all *Spaine* haue those weakneses of ioynts and members, that a man shall not see one amongst ten, but is inclined either to a traine or amble. And yet for mine owne part should I haue writtē of the originall of ambling, I should assoone haue taken this Empire of great *Britaine* for an example as any part of *Spaine*, or *Galicia*, holding that sure it is with vs as auncient as the vse of trauell, or the first knowledge of the first English gelding, which geldings we find more naturally addicted to ambling then any stonde horse whatsoeuer, which I take to proceed either from the impediment of their sores when they are first gelt, or else from the coolnes of their natures when those instruments of heate and lust are taken from them.

Now for the vse of this pace, it is onely for long iourneys, where either our necessary busines, or seruice to the state, or any other perticular affaire calles vs soorth into the world, and makes vs change our domesticall quiet for much labor and toyle in trauaile,

Now for the commoditie thereof, it is the ease of our bodies, preserving vs from aches, conuulsions, chollickes, gallings, and such like tormens: it is a maintainer of our healths by helping vs to vse the best exercise with suffrance and moderation, it is the best preseruer of our estats in this world, making vs follow our owne affaires with our owne diligence, and not like men imprisoned to trust to half speaking solicitors: to conclude take away the ambling horse, and take away the old man, the rich man, the weake man; nay generally all mens trauels; for Coaches are but for streets, and carts can hardly passe in winter. And thus much for the generalitie of ambling, and the profite.

CHAP. 2.

Why Foales amble from their dammes, and how to make them amble if they doe not.



He reasons why a Foale may amble, whe it suckes vpon the Dam, or that the first pace which it is seene to treade may bee an amble; are many & diuers, besides those which I haue repeated in my small trea- use, as namely weakenesses springing from the first gene- ration, or conception, or else mischances in foaling, as whe a foale falles in hollowe ground, vneuen ditches, or such like vilde places, where the foale struiuing to get vpon the feete, but cannot, doth beate it selfe into such weakenesse, that when it is got vpon the feete and should goe, it is not able to trot, but euen through extreame faintnesse shufte his feete into this pace of ambling; besides these (as I said) there are other more strōg causes of Foales am- bling, as namely if a Foale be foaled with weake hooues, so that when it comes to stand vpon the feete, the cronets of the hooues doe sincke inward and are painefull to the Foales going, In this case the grieve of the hooues keepe the Foale that it cannot trot, but is forced for ease sake to aler the natural pace, and to amble. This weakenes of the hooues you may plainly descerne both by the fashion of the hoofe, which will bee flat and thinne, and also by the Cronet of the hoofe, which will not bee swel- ling outward as it should bee, but flat and sinke inward without any semblance: and these horses for the most part

doe seldom liue long, nor haue many good conditions: another reason there is for the ambling of Foales, and that is, if any man shall come to the Mare when she hath newe foaled, and scaring the Mare, make the Foale start vpon it feet before it be lickt ouer, or that the soles of the hooves are hardned; if this hapen it is most certaine that the foale wil neuer trot, but presently fallēs to amble: from these & such like occasions hath sprung the opinion that Foales naturallie doe amble, and owners not seeing them haue anye other paces, strongly imagine that ambling is the childe of nature, when indeed it is the bastard, begot by mischance and weaknesse.

But if it bee so, that for as much as those amblers which thus doe amble euen from the wombe of their Dams, are euer the perfittest, swiftest, and most certainest in their pace, as hardly knowing, at least neuer vsing any other motion, it bee your desire to haue your Foales to amble thus vnder their Dammes, albe for mine owne part I haue litle fancie or lyking therein, yet it is to be done three seuerall wayes: the first and best is, if you take a Foale when it is two or three dayes olde, and that you see it trotteth perfirely, and with a fine sharpe Butteris or pairing knife, spare the hoofe of the Foale so thinne as may bee; so that it cannot treade vpon the ground, but with much sorenesse, and then put it to the Dam again, and you shal see it presently through the tenderesse of the feete, refuse to trot, and instantly strike into an amble. And if after the hardning of the hoofs you find that out of spirit and courage it fall to trot again, then you shall pare the hooves again, and so in a short time you shal see it will vtterly forget trotting. The second way but somewhat worse to make a Foale amble, is to take soft linnen ragges, and therewithall to garter vppe the Foales
hinder

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hinder legs, three fingers about the cambrell, but not to doe it verie straight, & so to let it run a week or ten daies, in which space it is most certaine the foale will fall to a ready amble, which as soone as he doth, you shall immediately vngarter his legges, for the vse of the garters is but only to bring him to the alteration of his pace. The third way & worst way, is to watch the mare when she is in foaling, & as soone as she hath lickt it & done her office, you shall goe vnto the foale, and before it bee able to arise from the ground, you shall with your hands, raise vp the hinder partes from the ground, making it stand vpon the hinder feete, and kneele vpon the fore knees and so staying it by the hinder loynes, compel it to rise vp before, as for the moste part oxen, and kine doe, and if a man will put anye trust in antiquitie; This manner of raising a Foale first from the ground, will make it amble, and for mine owne part though I haue been too scrupulous to approue it, yet such strong reasons doe gouerne me, that I doe beleuee it is moste possible, and as likely as either of the former which I haue experienced.

Now although these three seuerall practises, will bring to effect the thing you looke for, yet each of them hath their seuerall euils, and doe manye times create those mischeifes, which doe exceede and blemish the vertues for which they were first put into vse, except there bee such Arte, Iudgement, and discretion mixt with the practise, as may both warrant and defend it from following euills, As first the paring of a foales hooves so young, and bringing him to such a tender nesse of treading, makes him euer after whilst he is a horse, soft footed, & when he comes to tread vpon stony or soft ground, you shall see him snapper and many times tread false; onely out of the tickle and quick

feeling of his feete, besides the paring a Hoofe so young makes it grow thick & flat, so that when the foale comes to be a horse, he will neither beare his shooes so well as otherwise he would haue done, but also bee much more apt to heate, surbate, or founder with sleight trauell.

Now for the second practise which is the gartering vp of his hinder legges, that wil make a foale haue thicke and foule cambrels, insomuch that his ioyntes will appeare gowty and vnsteele, especiallye if you garter any thing too strait, it is somewhat dangerous for the breeding of blood spauens in Foales, because the blood being stopt so many daies together within the veanes, doth many times corrupt and take part with other grosse humors, which are the causes of that sorance. Lastly (and which is the worst fault of al) the ambling pace which is got by this experience is nothing comely to the eie, (albe it often fal out to be most easie) for the gartering of the foales legges, makes it cramble with the hinder partes, and goe both crookedly and illfauiouredly.

Now for the last practise, which is the rayfing vp of a Foale first behinde when it is new falne, besides that, it is not decent to handle or meddle with such young creatures, till their dams haue discharged their kindnesse, & that they haue taken naturall and orderly stifning: It is with horsemen held both vnwholsome and daungerous to the life of the Foale, for it is moste certaine that the compulsion which is therein vled, brings the Foale to a moste extraordinarie weakenesse and faintnesse, from whence and from no other secret, proceeds the alteration of the pace: wherefore since there are thus many dangers in these two carely tryalls; and that the working of these single benefits in foales, may lose al the future hopes and seruices which a man expects when they come to be

Horses;

The fourth Booke.

III

Horses; I would for mine owne part with al Gentlemen, how much soeuer they are naturally inclined to their owne ease, to omit and let passe this practising vpon foales (except it be at some speciall time when; for the bettering of their knowledges, they will trie the examples of their reading) and onely to put in vse those practises which are fit for the horses of elder age, as foure, fiue, fixe, or seauen, which hauing both strength and power to performe, and abilirie of bodie and member to indure the vttermoste which arte can inuent to impose vpon them, are more worthie of your labour, and more neare to your present seruice: & of them I purpose wholly to intreate hereafter.

CHAP. 3.

*How to teach a horse to amble by the help of a new
plowde field, and the faults therein.*



Here both haue beene & are many questions raised (not by horsemen, for they know the truth of art, but by such as bear the false shapes of Horsemen, as amblers, common horse breakers, (alike in qualitie to Mountebanks & horse collers) touching the making of horses to amble, some inuaying against one practise, some against another, neuer contented with any one certainlie, but with that which either they haue most vsed, or is last in learning, so that to reconcile them, and bring the to an vnitie both in arte and opinion, were a labour tedious and infinite, neither will I spend mine houres so vnprofitable: yet it is moste certaine there is but one truth and one true way to hit the marke wee shoote at, which because my knowledge shall neither bee a iudgement nor

Oracle, I will not so much arrogate to lay this is it, but vnfolde at large all the seuerall practises which either my selfe haue experientd, or else noted in other mens labors, together with such errors as pursue & follow euerie such method, so that euerie ripe & industrious braine, may by comparing the fruits & faults together, easily iudge which practise deserues the best entertainme^{nt} & is most worthy a popular imitation; wherfore to begin with the manner of making horses to amble, the first way that I found, which carried in it any substantial ground of reason: was to make a horse amble with the helpe of a new deepe plowd fiede, where a horses legs might sinke deepe into the earth, and make his labour painefull, and it is to be done in this sorte. You shal first put into your horses mouth, (if it be tender and good) a Snaffle verie round, smoothe and ful, of a size somewhat bigger then an ordinarie traue^{lling} snaffle, and with that ride your horse into some deepe new plowd field, All the way as you ride into the field, not suffering your horse to trot, but rather to go foot-pace. Adioyning to this field, you shall haue either some faire hye way, or else some plaine greene Meare, and then being vpon the hye-way, you shall plucke vp your bridle with both your handes, so that your Snaffle may not rest vpon his chap but vppon the weckes of his mouth, and then spurring him gentlie forward, see if hee will alter his pace, which if he will not (as it is moste likelye) you shall then thrust him vppon the deepe landes, and there you shall toyle him vppe and downe for a quarter of an houre, in as swift a foote pace as you can make him goe, suffering him not by any meanes to trot, although hee bee neuer so hastie, nor labouring much to make him amble though you should finde him willinglye inclyned there-
vnto, but onelye keeping him to the height of his foot-
pace,

The fourth Booke.

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pace, and bearing your bridle reyne aloft as was before tolde you. After you haue thus toyled him a prety while vppon the landes, you shall then bring him to the hie way againe, and then approue to make him amble by holding vp your bridle hand, carrying the reynes thereof strait, and by helping him with the calues of your legges, one after another, and sometimes with your spurres one after another also, as thus: if when hee begins to breake and alter his pace, hee giue you now and then a little iumpe vpon your right buttocke as hee goes, then you may knowe that hee treads false with his right hinder legge, so that then you shall giue him either the calue of your right legge or your right spurre hard to his side, but if hee doe the like with his left hinder foot then you shall giue him the helpe and correction vpon the left side, for you must knowe that in ambling it is euer the hinder foote and not the fore foote which treadeth false, and if you do but preciselie marke of which of your buttockes, or of which side of your bodye you feele the moste shaking or logging, you shall easilie perceiue which foot treads amisse, and therefore it is necessarie that before you take vpon you, to teach horses to amble, you be so well experient in the knowledge & feeling of the pace, that you may at the first apprehend the least step that your horse can tread amisse. After you haue thus the second time approud your horse vpon the hie way, if yet notwithstanding he will not fall to any amble, you shall then labour him againe vpon the deepe landes, in the same manner as you did before, onely in a swift foote pace, and thus continew from the landes to the hie way, and from the hie way to the lands, without ceasing, or giuing anye rest till what through his wearinesse, and what through the restraint and helpe of

of your hand, he in the ende breake his pace, and begin to strike an amble, which as soone as he doth, you shal cherish him therein, and so faire and softly ride him home, giue him some prouender, and let him rest three or foure houres: then take him forth again, and if you find him a-
 nothing vntoward, or forgetfull of what he last learned, you shall then in the same manner, and with the same labour practise him againe, till you make him doe somewhat more, and somewhat better then hee did at the first teaching, and then ride him home againe.

In this manner you shall exercise your horse, at least thrice a day, till you haue brought him that he will strike out his amble truly and freely, which belecue it he will verie suddenly doe, because (for mine owne part) I haue neither seene, nor in mine owne practise found any horse which this manner of labour woulde not bring to strike a faire amble in lesse then an hower and a halfes trouble, the toyling vppon the landes, and the temper of your hande, which neither restraines him so much that he can stand still, or vse disorder, nor giuing him so much liberie that hee may trot or gallop, breeding such a confused amazement in his minde, that hee can finde no way to ease himselfe, but by the alteration of his pace.

Now whereas the principall respect a man is to haue in teaching horses to amble, is that they strike their hinder feete home, rather halfe a foote ouer, then halfe an inch short of their forefeete; this manner of teaching doth performe it without anie trouble or toyle of the Ryder, because the horse being brought to his amble out of a foote-pace, hee dooth euer strike out his feete to the vttermost length, and beginnes his ambler in the longest strides that may be. Also this kinde of instruction hath no neede of masse or heauie shooes, to bring downe the
 hinde

hinder feete, but the verie toyle in his foot-pace vpon the deepe earth, is as sufficient as any poyle or waight a man can deuise for the purpose.

Of all the seuerall wayes to make a horse amble with the hand onely, there is none in my conceit so absolutely praise-worthie, as this: both because it deliuers the pace in easiest and best manner which is out of a foote-pace, and also is gouerned and accompanied with so many seuerall corrections, that a horse cannot so soone erre, as euen the ground on which hee treads (which is deepe plowed lands) and the paine of his owne motions when his feete are misplaced, will giue him notice and helpe for amendmend; insomuch that had not mine experience waded into some better trialls, surely I should giue this method, the onely precedencie and superioritie; but so it is, that as it hath in it good show and ground of reason; so it hath also many errors and inconueniences depending vpon it, which dooth blemish much of the better perfection, as first the cariage of the hande, which gouerneth the whole mouth by the least and worst part of the mouth, which is the weekes onely; doth pull the best serled reyne that is, quite out of order, and brings a horse to the putting out of his nose, a gaping with his mouth, and such a generall incertaintie ouer all his bodie, that albe you bring him to the ende you desire, which is to amble, yet he doth by the manner thereof loose so much beautie, grace, and other more carefull perfections, that a horsfoman will euen be ashamed of his labour. Againe, if the horse beyong and vnwayed that is thus taught, the verie toyling him vpon the deepe landes will bring him to a weakenesse in his limbes, to a fainnesse and dispaire in labour: and in steade of those encouragements which his youth and ignorance should haue giuen

him such distast and griete, that hee will bee worse for tra-
uell whilst he liues after, yet I know this manner of teach-
ing horses to amble, is practised by diuers men of the best
fame in this arte, with whom I haue for mine vnderstan-
ding many times argued, & though they haue beene out
of their long practise only adicted to this rule and none o-
ther, yet could they not denie the incōueniences, but haue
beene faine to stop my discourse with this Addage. That
there is no profit without his discommodity: & hee that
will haue his horse amble, must indure the inconuenien-
ces which followe ambling; but haue esteemed their an-
swers like their Artes, that is, to be meare deceites, Falla-
ces, and sophistifications.

CHAP. 4.

*Of making a horse amble from his gallop, or by
ouer riding.*



From this former practise of the plowde-
lands (according to my imaginatiō) I thinke
hath sprung vp this second practise of ma-
king a horse amble from his gallop, which
is deriued from selfe like violence, though
in another fashion: for the first doth but bring him to his
amble by toyling him in his slowest pace, and this by a-
mazing him in his swiftest; and it is to be done after this
manner.

- You shall first ride your Horse into some peece of
ascending ground, I doe not meane against the side of any
steepe

steepe hill, or vpon anie hanging ground, but vpon such ground as is onely rising apparantlie to the eie, and no more; then putting your horse into a leasurelie gallop for some twentie or thirtie yardes, you shall vpon the suddaine by giuing him a hard chocke or two in the weeks of his mouth, not make him stoppe, but at first as it were in a confused manner, make him leaue off his galloppe & shuffle his legs disorderlie together (which naturally euerie horse will doe) and so by giuing him manye of those chokes and breakings off, you shall in the end feele him strike a stroake or two of a perfit amble, which as soone as you feele, you shall presently holde your bridle hand straight, and putting him forward with the helpe of your legges, or with your spurres, keepe him vnto that pace as long as you can, spurting him somewhat hard vpon that side of which you shall feele him to treade false, which is euer that which shakes your bodie moste: but when you feele him in despite both of your helpes and of your corrections wilfullye giue ouer his amble, and that he will continue it no longer, you shall then put him into his galloppe againe, and as you did before, so you shall againe the second time chocke him in the mouth and so bring him to his amble againe. This you shall doe so oft till your Horse come to the perfit vnderstanding of your minde, and that he knowes all his corrections, labours and torments onely proceed from the handling of his feete, contrarie to your disposition, which knowledge you shall easily bring him vnto, by making a difference betwixt his wel dooing & euill dooing, with cherrishings & punishings, neither animating him when hee erres, nor correcting him when hee doth as you would desire, which obseruation will so fortifie him, that through delight and feare, hee will

wholy frame his actions and motions according to your will and arte in ryding.

Now when you haue thus by houely and incessant labour, brought your horse by little and little, as from one step to two, from two to three, and from three to foure, to such perfitnesse, that hee will amble some twelue or twentie score yardes vpon plaine ground well and truely, then you shall onely by exercise and riding him euery day more and more, and putting him euery day to groundes of more incertainty and roughnes; In the end make him so cunning and perfit, that no ground or hie way will bee too difficult for him to treade vpon: and truely thus much I must say for Ambling, that as it is a motion of all motions moeste easie to be taught vnto any horse, so it is the hardest of all other lessons to be confirmed and made of continuance in any horse whatsoever, except there bee a certaine naturall inelynation in the horse settled & adiected to the pace of ambling, before the beginning of your labour, whēce it comes that many of our horse amblers will make any horse amble for a small road, or the length of a faire or market, yet when he comes to incertaine waies, or long iourneyes, then he is as farre to seeke in his easie pace as if he had neuer bene taught the motiō; wherfore mine aduice is, whē you haue brought your horse thus from his gallop, to strike an amble (which euen nature it selfe driues him into) that you bee not too hastye either to put him vnto soule, ruttie, or rough waies, or by iourneying to ouer toile him in that he hath but newly learnt, till by former exercise and increasig by degrees, you finde him both apt & able to performe as much as you shal put vnto him.

This method of teaching I haue scene pursued by sundrie of this profession: and haue heard many arguments

tin

in defence of it, against other manner of instructions, but for mine owne part I thinke of it as I thinke of the former, that the toile is vnorderlye, the vnderstanding thereof thrust into a horse barbarouslye, and the good effects, which it should worke, are both in certaine and void of continuance; it doth, as the method before described doth; that is marre the horses mouth, disorder his reyne, & takes from him all the beauties of a good countenance, it puts a Horse in great danger of ouer-reaching and striking one foote vpon another, from whence many times comes *Quitter-bones*, *Crowne-scabbes* and such like so- rances, which are euer to be auoided, where there is a bet- ter way to compasse that which we labour for.

To this manner of teaching horses to amble I may ve- rie well ioyne another, which many yeares agoe I sawe practised by a Scottish Ryder, whome then (in my first be- ginning) I had heard great cōmendations of for this art; so that whē I found him curious to shew me his skil, I haue watchd and dogd him in priuate to take notes from his riding; and I found his order to make a horse amble was first to ride his horse into some deepe new plowde field, and there to galloppe him vp and downe till the horse for want of winde was not able to galloppe any longer, then to giue him breath, and so to galloppe him againe til he found the horse grow faint, & then to bring him from the lands, and in some euen faire way, to put him to amble, by the straitning his bridle hand, & holding vp his head aloft, so that the horse might not well see the way before him. The wearinesse he had formerly brought the horse vnto, vpon the deepe lands, would make him vn- willing to trot, the straitning of his head, & putting him forward with his spur, would thrust him faster forward then footpace, and the want of seeing his way, would

make him take vp his forefeete in such a fashion, that hee could well vndertake no pace but ambling : this I haue seene him doe twice and sometimes thrice a day, so that what horse soeuer he began with all in the morning, hee would euer make amble before night, by which meanes he got much fame and wealth : but for mine owne part, although I know there is nothing brings a horse sooner to amble then wearinesse and ouer-riding, yet that it should be my practise to instruct horses by such a rule, I cannot but infinitelie dislike it, and it needes no further discommendations then the bare title it moste properlie beares, which is to make horses amble by ouer riding them; and surely I thinke it was first found out, either by some chollericke person, who seeking to make his horse amble by one of the former rules, and finding him not at the first dash to answere his expextation; hath presentlie out of his furie salne to spurre and galloppe him whilst hee could stand, and so almost tyring his horse, hath vpon his wearines, (as all horses are) found him a great deale more willing to amble; or else it hath proceeded from such a one who riding some long iourney vpon a trotting horse in hard waies, hath when the horse was wearie (as it is the propertie of all horses) found him of his owne accord alter his pace, and fall to plaine ambling; but whosoever or how soeuer it is or was found out, for mine owne part I cannot either commend, or giue allowance vnto it, onely for your satisfaction deliuer the maner thereof, that when your own desire shal take from you the beleefe of reason, you may then out of your owne experience, either allow or disallow what heerein hath beene dylated vnto you. And thus much for this kinde of ambling which procedes from the worst violence.

CHAP. 5.

*How to make horses to amble by the vse of
waights.*



Of farre different in nature, though much more temperate in qualitie is this manner of teaching horses to amble by the vse of poise or waight, for albe it doe not wearie a horse in bodilye labour, yet it weakens & makes feeble his members by suffering an extremitie greater then his strength is able to contend with, for if his burthē be kept within the ability of his power, then it workes no new thing, but keepes him still in the state of his first creation; whence it comes to passe that if you will make a horse amble by waight, either that weight must exceede in malines, or troublesomnesse, or else no more, preuaile, then if such weight were not vsed at all.

This manner of ambling is verie generally vsed in this kingdome by sundrie professors, yet not all of one fashion; but according to the humors or inuentions, so the manner thereof doth alter: for I haue seene one horseman bring his horse to amble by waight after this manner: he hath first caused to bee cast in the fashion and compasse of a pasterne, greate rowles or wreathes of leade of the weight of some sixe pound a peece, and lapping them in listes and wollen cloath hath made them fast about the neathermoste ioyntes or pasternes of the horses hinderlegges, and then riding the horse abroad, haue with the helpe of their bridle hand, as is explaiend in former Chapters, tride to alter the Horses pace,
but

but if they haue found that either the horses courage, or the smoothnes of the way, hath made the horse either not feele, or not respect the waights, but to holde the trotting pace stil, then they haue with those waights ridden the horse into some deepe new plowde felde, and there with the waights about his heeles to labour him vpon a swift foote pace, till the horse out of his wearinesse hath altered or at least shuffled his feete so confusedly together, that he hath gon betwixt an amble & a trot, then the rider hath brought him into the plaine way, where the horse hath had libertie to cast forth his legs, & there with his hand hath put him into his amble, which presentlie I haue scene the horse vndertake, for what through the waights about his legs, and the wearines hee was formerly put vnto, it is impossible the horse should trot, and so by little and little the rider encouraging him, and the horse feeling the ease of the amble to bee much more then his trot, I haue scene many horses made verie perfit and ready in the pace. Other Horsemen I haue scene, which to make their horses amble, haue laide graite waights vpon the hinder partes of the horse aboue his fillets iust behind the Saddle, as namely the waight of ten or twelue stone, and so to ride him first in deepe high way, or plowed ground, & if he do trot away with any lightnesse then to augmet the waight, til he begin to solter or strike his feet false, and then to bring him into some plaine high way, & there to put him into his amble with the helpe of his had and legs, checking him in the mouth with the bridle, and spurring him vpon that side of which you feele his hinder foote treade the ofttest false, the waight which is vsed for this purpose is most commonly earth, leade, or some such heauie stuffe: then needeth little or no art to bee vsed in this maner of teaching, more then to haue this discretion,
that

that though the waight be more then the horse with conuenience can beare, yet not to be so much as to bruse his limbes, albe such mischiefes oft spring frō such teaching; you must also when you teach a horse thus to amble by waight, let him haue verie little rest, but be ryding and exercising him euerie houre or once in two houres at the furthest, and as hee becomes perfit in his pace, so by degrees to make his burthen lesse and lesse, til he will amble verie readilie without anye more waight then the rider onlie, & the by little & little to traine him vpon rough & vncertaine waies as somtimes vp the hill, somtimes down sometimes orethwart landes, or ouer layes or driefurrowes, & whē he knowes how to take his way vpon such vneuennes; then you may presume his cunning is sufficient. This manner of teaching a horse to amble, is both easie & certaine, yet in my iudgemēt not of such valew as is worthie of any painefull imitation, because the dangers and inconueniences which doe attend it are more then may be tollerated in so smal a benefite, for first besides the manner of the toile which is vpon deepe landes, and so hath al the mischiefes which are formerly spoken of, the waights also which are to bee borne vpon the hinder pasternes, doe not onely beate and bruse the Sinewes in those partes, but also vpon the least slippe or false treading doe hazard those straines which are sildom or neuer cured. Then for the waights which are to be laide vpon his backe, which must so farre exceede as to alter a horses pace, a man shall hardly carry that temper either of iudgement or hand, as to poise him o a dew proportiō, & then if he exceed he either breaks the backe, swaies the backe, or brings him to the consumption of the backe, and if he make it but a little to tight, he either wastes his labour to small purpose, or else brings to the pace a haling &

vncomelines, how euer, this is certaine, that a horse which is trayned to his amble by weight, hath euer for the moste part danger or disorder brought to his hinder partes; besides, the horse that is thus to be trained, must be of such a colde and frozen nature, that hee will neither start at boggard, stirre with the spurre, or bee troubled with anie palsion; for if hee shall, there is not then the least affright which will not put him to the hazard of much mischiefe; and if a horse shall but get the smallest cricke in his backe, it is a griefe that will trouble the best Farryer to knowe how to amend it, and for the moste parte they are mischiefes which I haue seene sildome repayed.

Now for the taking away the tenderneffe and constancie of his mouth, the spoyling of his reine, & the beauty of his countenance, they be so general both in this, & almost all other courses, which are to make horses amble; that I may verye well spare speaking of their losse, because it is most commonly the first worke amblers goe about to depriue their horses of thole good vertues.

Now lastly the labour which a man must take in this maner of teaching is so infinite and incessant, that it both robbes a man of the delight he should inioy after his wish is effected, and also depriues him of much hope, by making him dispaire in so endlesse a labour; to which I may adde this mischiefe, the worst of all other, that I haue not knowne more good horses spoild and made vtterlye inuisable by any wilful course whatsoeuer, the by this pre-script cruell method of making horses amble by weight, and the former intollerable labours.

CHAP. 6.

Of making a horse to amble out of the hand.



Some horsemen who haue been of more temperate & milde dispositions, hauing seene horses brought to amble by the rules before described, and noting the tyranie of the man in tormenting a beaste that is created for his vse, seruice and familiaritie, worse then a rauinous mōster or an impoysoning serpent, haue out of their milder cogitations found out another way to make them amble, which though it be somewhat painefull to the man, yet it is nothing so cruell to the beast, and that is first to make them amble out of hand, by which I mean that a horse shall be brought to amble perfittly of himselfe, without either carrying the man vppon his backe, or hauing anye especiall vse of the mans hand in his ambling, it might more properly bee called ambling in the hand, because the horse is brought thereunto, as the man leades him in his hād, & not rides him, after this maner: first you shal take your horse in a bridle, & leade him alongst some straight wall, and ioyning the horses side thereunto, you shall place your owne bodye close to the shoulder of the horse which is from the wal, that you may whether hee will or no holde him vp in a streight furrowe: then with your rodde turned backward in your hand, so that it may reach to his buttocke, you shall iert and force him forward, and in the verie instant that the horse presses forward, you shall with that hand which is vpon the bridle, giue him a good chock in the mouth

that you may make him stammer, and shuffle his legges confusedly together, and then presently ease your hand againe, so that he may neither stand still, nor go backward, but still keepe his way forward, and at euery two steppes to giue him 2. chocke or two in the mouth to make him shuffle his legs, till you perceiue him to take vp two legs of a side together, and then presently to cherish him, and then to exercise him againe after the same manner, til you haue made him to strike two or three strokes of his amble together, and then you shall cherish him more then before. And thus you shall continue to doe, till you haue giuen him a perfite vnderstanding of your minde, and that he may with assurance perceiue wherfore hee is corrected, and wherfore he is cherished.

You shall during this maner of teaching, by no means suffer him to trot: but if perforce he will, and that at first you cannot keepe him from trotting (as it is verie hard in the beginning,) you shall then euerie stroke that hee trot-teth, turne your bodie about, and with your rod giue him a good iert or two ouer the hinder houghes, and vnder the belly, because it is euer his hinder parts which treade false in ambling, and then fall to your businesse again: after this maner you shall bee euerie houre in the day doing somewhat vnto him, neuer suffering the horte to rest an houre at peace, til you haue brought him to the true hād-ling, or the taking vp of his legges, increasing his labour dayly in such sort, that in the end you bring him to amble the whole length of the wall, or an ordinarie road, which is for the most part 5. or sixe score yards: when you haue made him perfite thus farre forth; you shal not then ease any part of his toyle, but continue him still in his howerly labour, till you haue made him so perfite, and giuen him such delight therein, that hee will amble in your hand, with-

without the vse or need of any correction whatsoever. This being done, you shall then take the bridle forth of his mouth, & put vpon his head a plaine chaine, or the gentlest Cauezan, and make him onely with either of them amble as perfectly as he did before with his snaffle, observing that as he growes perfiter in skill, so you ease his restraint, and beare the Chaine or Cauezan as gently as may be, till he will amble of himselfe, without any touch of the Chaine or Cauezan: then you shall make him amble onely by the vse of his collar, without any other restraint. And lastly that he will of himselfe (you running by him with loose reynes) amble as perfectly as when hee hath the greatest restraint whatsoever.

Now you are to remēber, that whē you first teach your horse to amble thus by you, if he be of a slow and dull nature, so that when you carrie your hand any thing strait he will not presse forward, but either stande still, or goe backe; or if hee doe goe, it shall bee but so slowlye that it shall not excede a foot pace. In this case you shall haue a foote-man to come behinde him with a rod in his hand, who as you restraine him, shall force him to go forward, either as fast or as slowly as you will, till you haue brought him to the knowledge and true vse of the pace, and then you shall vse his helpe no longer; for whatsoever you are to doe after this is effected, onely vse and practise will bring your horse vnto, without either scruple or amazement; for there is nothing after a horse knowes how to take his legges vpright, which brings a horse either to perfectnesse, or imperfectnesse, but onely practise. I haue seene some horsemen (and my selfe also hath done the like) which haue taught this kinde of ambling in a close house or barne, but it is nothing so good, nor so voide of difficultie, as is the vse of the straight wall, if a man can

haue one conueniently: but where the straight wall is not to be had there I prefer the close house, because there a man may leade his Horse either close by the walles, or otherwise if hee leade him in the midst of the house, yet the horse cannot flie much out of order, because the compass of the walls will not giue him any great libertie.

After you haue made your horse thus perfite that he wil amble by you in your hand (which amblers call ambling out of hand) so that when either you lead your horse to the water, or to sport, or about any other exercise, he will vse no other pace but ambling: then (and not before) you shall saddle him, and mounting his backe by a temperate carriage of your hand, and by laying your legges close to his sides, you shall thrust him forward, and make him amble vnder you, which if at first (as I haue often found, and it was the first reason, which made me disallow this practise) you perceyue that he falles into his trot, and refuseth to amble, as if he had neuer bene acquainted with the pace; which indeede is so naturall to many horses, that you shall beholde many (and my selfe haue had the riding of some) which ambling euen from their first foaling; haue when they haue come to the Saddle, and carriage of the man, presently falne to trot, which they were neuer scene to doe in all their liues before, by which I haue gathered, that a horse doth take an extraordinarie pride & delight in the seruice and carriage of the man. If then your horse thus refuse to amble vnder you, immediately you shal twitch vp his head, and giuing him a good chocke or two in the mouth, and striking him with your spurs, one after the other, you shal thrust him into his amble, which your correction & amazement ioyned with his former knowledge, wil soon bring him vnto, & then after he strikes a stroke or two, and is cherished, coming to vnderstand

derstand your meaning, he wil the fall more readily to his amble, and with so much more comelines and truth as he was formerly experienc'd in the pace before.

Now that this maner of teaching horses to amble, is either so full of art, ease, or comelines, that it deserueth either your labor, or a general imitation, I am not of the opiniõ because as the former methods, so this is accõpanied with many foule and grosse inconueniences, such as a horse by no meanes should be acquainted withall; for besides the losse of time in the man, bestowing a long labour to little purpose, and spending his howers to bring his horse to an vnprofitable exercise, which is to amble without the man; the verie manner of bringing a horse vnto it, which is by chocking him in the mouth, and distempering his head, is most vilde and insufferable; for if the horse be of spirit and courage, by such correctiõs, the horse instead of ambling falls to rearing, plunging, and other restife qualities, one of which will aske more labour to amende, then to make twentie horses amble. And indeed to say truth, I haue not seene a horse of any good mettall that hath beene brought to amble by this manner of teaching, or if they haue, yet it is impossible they should continue long therein; for euen their owne courages will transport them, & make the wearie of such an in temperate motion, and on the contrarie part, if the horse bee dull and heauie, his sloath and vnimblenessse will bee so contrarie and rebellious agaynst this practise, that the Ryder had neede of a more then an ordinarie patience to endure the slackenessse and vntowardnessse of his incapable spirit, which will neither vnderstand, or if he do vnderstand, yet will not execute any thing any longer then correction & torment lies vppon him: Thus you see that neither the hot fierie horse, nor the dull slow iade is fit for this kinde

of

of instruction; insomuch that if you haue no other method to teach a horse to amble by, but only this, you shall either run into many inconueniences, or the losse of your time, or els onely deale with such horses which are of such well mixt qualities and dispositions, that they are neither too fierie to rebell or contende against instruction, or not so dull, as not to conceiue what you would teach; or when they doe conceiue out of sloath and idlenesse to leaue your will vnperformed: it is the mediocritie with which you must deale, which being seldome found, you may liue an age ere you meete with a horse of that temper. And thus much for the making of horses to amble out of the hand.

CHAP. 7.

*Of making horses to amble with the helpe of
the hand onely.*



Vch horsemen as had practized this former way to make a horse to amble out of hand, that is before a man cometo ride him: whē they found that the horse coming into hand, that is, when he came to be riddē, was in their first iudgements, as imperfite in ambling, as if he had beene neuer taught to amble before, and that they haue beene as it were drawne by a new method to bring their horses to amble, they haue presently by looking into the losse of the former time, and to the benefite of their present exercise, condemned the former maner of teaching, & only helde tollerable no other way to teach a horse to amble, but the vse of the hand and legge

legge onely arguing with other riders (which did not the like) of the faults which were in their practises but not beholding any in this which now was last brought to their memories.

And this maner of teaching horses to amble seemed at the first so strange and artificiall, that euerie rider of ambling horses, was thought vnworthie which taught by any other forme; and euerie horfmaister thought his horse not wel taught, which came not from his hand, who was reported to teach by the help of the hand only, the maner whereof is, After you haue put into your horses mouth a rough rround snaffle, such a one as through the crueltie thereof will command from the horse an extraordinarie obedience (for in this manner of teaching, you must haue your horse exceedingly tender mouthed) you shall then take his back, and holding your bridle reine in both your hands, a handfull one from the other, you shall walk your horse gently into some plaine highway, and there first thrust your horse into the swiftest of his foot pace, and if he offer to trot, you shall lift vp your hands, and giue him a good chocke in the mouth with your bridle, and then put him forward againe, holding him at the swiftest of his foot-pace, and so ride him vp and downe for an hower or more, struiuing still to make him goe faster and faster; and every time that he doth but offer to trot, to giue him a good chocke in the mouth, and a stroke with your spurre on the side which he treadeth false with his hinder foot, & by this means correcting him both in the mouth, & vpon the sides when he trots, and yet vrging him continually to goe faster in his foote-pace then he is able, you shall in the ende bring him to strike forth an amble, which when he doth, you shall then carrie your hands constantly, and without spurring him, shew that you are contented with

that motiō, obseruing that you keep him to such a temperate pace, that you neither by making him go to fast, vrge him to trot, nor by causing him to goe too softly, keepe him within the ease of his foot-pace; but let the first bee made troublesome to him by correction, the other painful by too speedie passage. This course will not onely bring him of himselfe to finde out the true stroke of an amble, but also by keeping him in his foote pace, make him to stride and stretch out his legges, that his pace will bee both more comely, more certaine, and more easie.

After you haue thus by the helpe of your hand, helde strait vpon the bridle, and the correction of your leg and spur brough your horse from his foot-pace to an amble, you shall then continue him, and augment his pace thereupon in swiftnesse, euerie houre a little more and more, till you haue made his amble swifter then euer was his trot, and that he will strike the same, both vp the hill, downe the hill, ouer crosse paths, rough wayes, myrie new plowed lands, or wheresouer else you shall haue occasion to trauell, which onely continuall exercise must bring him vnto, and his owne nimble cōnning, obseruing by no means to put him too soone to trauell, or to amble him long together at any time, till he be so perfit and skillfull in the pace, that he wil take it both cūningly and freely of himselfe, albe the bridle reyne lie in his necke, and you haue no vse of the same: you shall also obserue, that if this round twound snaffle which I did first prescribe vnto you, bee either so rough, that it cut, or gall the horses mouth, or if the horse bee so exceeding tender of mouth, that hee is not able to indure the sence of such sharpnes, you shall then instead thereof vse onely a smooth snaffle made full, round, and of an extraordinarie bignes, about which if you folde certaine wreathes of some fine

linnen

linnen cloath, to make it as full and bigge in the horses mouth as may be, it is much the better and more sweeter and the horse will take his pace with more delight and chearefulness; but if you feele that albe he take the stroake & manner of his pace truly inough, yet with the rayfing vp of his hinder feete somewhat to hye (which motion he taketh from his trot) you feele he doth not goe away easie inough, in such a case it shall bee meete for you to make his hinder shooes of an extraordinarie weight, and thickens each shooe, weying at least fve poundes, which will so tyer and load his feete that he wil be glad to keepe the downe and euen sweep them close by the earth as hee goes. Now although this maner of teaching horses to able bee both generally comended & moſte of all other-waies practiſd in this nation; yet for mine owne part if it bee ſo good as men do imagine, I muſt confeſſe my ſelfe to bee a great heretique in my beleefe therein, for I can neither alowe it to be contained within any rule of good horſe-maſhippe, nor that it is worthe anie mans labour to endeavour to learne it, both becauſe it is accompaigned with as many errors as anye other of thoſe methods which goe before it; and alſo becauſe there bee a greate deale more artificiall waies to bring a horſe to this pace without the faults that this holdeth, which faults are theſe: the waſting of more profitable time vainly, the maring of the horſes reyne, the diſtẽpering of his mouth, & ſpoile of his couẽtenãce, which theſe checkings & ſuddain chockes do, beſides the breeding of a generall inconfſtancy ouer all the horſes body, which is the groſſeſt fault which can at any time be found in horſemaſhip. So that to cõclude, howſoever mē may be conceited, & ſpeak in the cõmendatiõs of making horſes amble thus with the hand onelye, I for my part cannot be inducẽd either to giue it any tolleratiõ

in mine opinion: or to preserve it for any other practise then only for the knowledge of generall experience. Thus you see I have hitherto shewed you sundry waies how to make horses amble, as namely by the fallowe fiedde, by waight, out of hand, with the hand, and some others; yet to euerie one I have shewed you such errors and inconueniences adroyned, that in my conclusion I made them both vnprofitable, and not to be practised, wherby I must confesse I have hitherto left you in amazement (that since ambling is so necessarie, and of such general vse, that we cannot trauel or iourney without it) what course is to be taken to bring a horse vnto it without either the grosnesse of these former errors, the misexpencc of time, or the losse of a horses beautie and good countenance, which laborinth to bring you out of, and that you may see what I have formerly writtē, is but to inable your memories with euery seuerall knowledge and experiment which hath at anye time beene practised for bringing this worke to passe: And that the knowing of errors may inable you the better to shunne errors, I will now proceed to those waies in teaching which are compleate in arte and worthie imitation, without any error but such as shall proceed from the fault of the rider.

C H A P. 8.

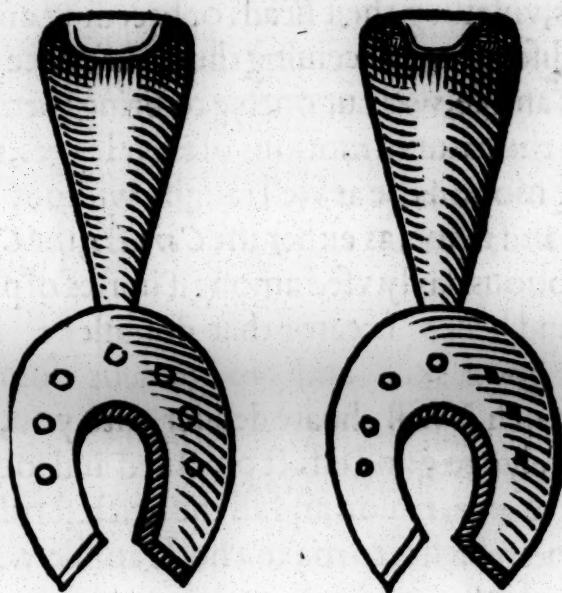
Of making horses to amble by the helpe of shooes onely.



FTER these former wayes of teaching horses to amble came to bee put in practise by men of art & skill in horfmanship, and that they came to find the errorrs and inconueniences which doe necessarily belong to such insub-

insubstantiall instructions, presentlie they out of their better iudgements & inuentions began to finde out meanes to make horses amble without either marring their mouthes, vnsetting their heads or breeding any other vncomely disorders, conceiuing thus: that since the making of horses amble, was but onely to bring them to an alteration of the naturall motions of their legges, why should not those motions be as well taught without disorder to the head and reyne, as either the *Coruett*, the *Cepriole*, and other motions dayly vsed amongst horses of pleasure and seruice, and hence it came that doubtlesse some man both of good skill and iudgement found out this way, which I will heare deliuer vnto you, and which I haue lately to good effect practised and found both agreeable to arte, reason and all the strictest rules in horsemanshippe; which is to make a horse amble with the help of two hinder shooes onely, and this is the manner thereof; First you shall cause a Smith to take measure of your horses hinder feete, and to make him two shooes of an extraordinary thicknesse, and from the toe or forepart of the shoe, to beate out as it were a thin plate scarce halfe so thicke as the shooe, and being at the toe of the shooe not aboute too inches or a little better broad, but at the vttermoste end of the plate better then foure inches broad: this plate must from the verie toe of the shooe forward, rise a little shoaring from the ground, so that the horse standing full vpon his feete, the outmoste end of the plates must be as hie from the ground as the horses fetlocke, and they must haue their ends turned vward backe againe towards the horses hinder legs, so that as the horse puts forward his hinder feet, if he chance to hit vpon his forelegs, yet the plats being so turned forward, may haue no force to hurt or bruse the horse but onely to giue him a flate

blowe and no more ; the fashion and proportion of the shoes are contained in these figures.



To apoint or set downe any certaine length for these foure plates I cannot; for they must keepe their size according to the proportion of the horse, or largeness of the stride he takes, for if he be a horse that takes a lōg step and strikes his hinder foote forth euen close to the setting downe of his fore foot, then these plates may be the shorter, but if he bee a horse that takes small steps, and doth as it were set his hinder feet downe where he takes them vp, then must the plates be made so much the longer, yet because I will not leaue you in amazement, you shall vnderstand that the best obseruation you can take for making these fore plates of a true length, is to let your horse walk in some sandie way, where you may see the print of his feet, and then looke how much you see his hinder foote to tread short of his forefoot to make your foure plates
about

about some 3. inches longer & no more, as thus for example, if your horse bring his hinder foot to his forefoote, by three inches, then you shal make your plates 6. inches, & so according to this rule, you shal either increase or diminish, of the two choices, rather making it with the shortest the longest, for if they be too long, the they giue the sorer blow, and may so bruse the horse vpon the sinewes, of the fore legs, as may bring him to a lamenes, & thereby not only procure to your selfe great losse, but to the Arte greater discredit, which in truth is vtterly without blemish but onely for your owne indiscretion. When you haue shod your horse with shooes of this fashion, you shall first with all gentlenes leade him as mildely as you can vp & downe, either in some euen hie way, or vpon some plaine greene walke that your horse may first feele the shooes, & that when hee growes amazed at the blowes which they wil giue him vpon the fore legs, which at first wil be sharpe and paineful, yet you may stay him and with chertishings sortefie him and incourage him till he come to an vnderstanding how his torment comes, which onely proceedes from this reason, that if when he moues his right hinderfoote, he do not also in the same instant remooue his right fore foot, then those plates must perforce beate him vpon the fore leg, & make him whether he will or no remooue it, which the horse no sooner will perceiue; (and finding the motion which hee keepes him most from torment) but he will presentlie followe it, and by no meanes afterward in a whole day hazard the knocke of one blowe; I wold haue you thus for at least the space of two or three daies to doe nothing but lead your horse vp and down in your hand, making him one while goe softlye, another while swiftly, till he be so perfit that he will amble in your hand, if it were an houre together, without giuing himselfe one rappe with his shooes, and during those first

first two or three daies you shall applie him in this hard lesson, at least halfe a dozen times a day, and when you haue made him so perfit that hee will amble by you both readilie and cunningly; then you shall mount his backe & ride him either in some faire Greene close, or some euen road way an houre together, in all which time of tiding you shal neither chock him in the mouth, nor distemper his reyne, but carrie an euen and sweet hand vpon him, giuing him encouragement in all his doings for there is no fault which can any way belong to his pace, which the shoe wil not sufficiently correct & put in order. VVhē you haue ridden him thus an houre in the morning, you shall then ride him as much in the after noone, and as much also in the euening, obseruing this order for at least foure or fīue daies together, which done, you shall then take his back in the morning, and ride him without either rest or ceasing till it be noone, and then bring him home, and if he haue gone orderly & kept his pace in such good and perfit sorte as you would wish without either stumbling or willingnes to giue ouer his pace, you shall cause the Smith to take off those shooes, & to set vpon him a good paire of ordinarie shooes, onely in the weight and massinesse, they would be extraordinarie, for they must way at least as much as two paire of any common shooes. With these plaine shooes without any plates, you shal ride your horse at least a fortnight together, and then remoue them and set such shooes as are both fit for the horses vse and Trauell, without either extraordinarie weight or any other deuise whatsoeuer.

Now for any errors or inconueniences, which this manner of teaching a horse to amble shal bring vnto him, there is in truth none at all; for the rider hauing free libertie to vse his hand, bodie and legs at his owne pleasure, if then he

The fourth Booke.

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he commit any euil, it is his own fault, and not the necessity of the instruction, for there is not any man, if he can but sit vpon a horses back, which by this method shal not make a horse amble in as good maner (touching the motion of his legs) as the best arts master whatsoeuer: the reason wherof is, that the very shooes do of themselves correct al those vices, which in other practises is the dutie of the horsman to do, as thus for example; if the horse doe not strike out his feete as hee ought to doe, but offer to tread short, the very knocks which the plates wil giue him vpon the legs, will put him to such paine, that hee will for verie feare, & to auoid the torment, stretch his feet forth as farre as he is able: they will also make him raise his forefeete nimbly from the ground, and through their waight and troublesomnes make him keepe his hinder feet close and neare to the earth, they will make him that he shall not straddle or go to wide behind, neither will they suffer him to go so strait that he shall be in hazard of interfering: to conclude, they do as much in this worke as any man can wish, & is if a maner of teaching, which if my wit can iudge or mine experience were worthy to perswade, I would haue practised before any other way whatsoeuer, except it be the tramell, which I preferre and esteeme an equal both in vertue and goodnesse.

CHAP. 9.

Of teaching horses to amble by the vse of the tramell.



Here wil be multitudes which wil in their arguments oppose themselves, as violently against me as may be, both to condemn this which I commend, and also to diswade men from the vse of this practise,

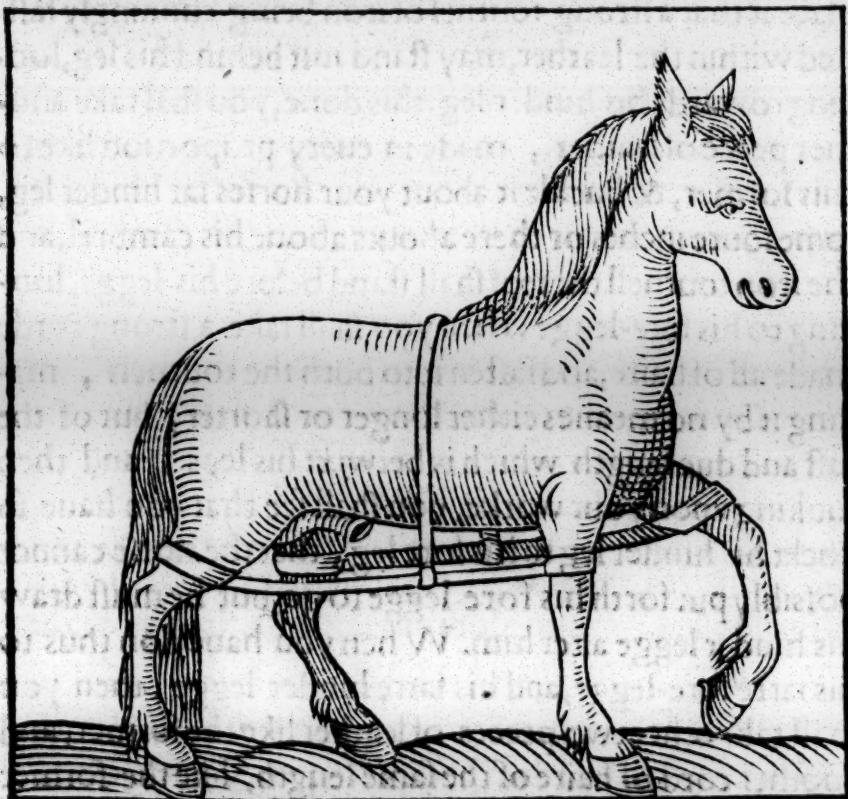
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which I moſte allowe; I doe not doubt, for I haue not in Table or ſtable diſcourſes heard anye thing more enuayd againſt then the teaching of horſes to amble by the helpe or vſe of the Tramell, ſome ſaying it lames and ſtraines horſes: ſome that it makes a horſe not take vp his feete right; ſome that the pace ſo giuē is not eaſie: with a world of ſuch like diſcommendations; but for mine owne part, I am by experience and praſtiſe ſo vndoubtredly reſolued and knowe ſo aſſuredly the contrarie, that I can neither credit their ſurmises, or loue the experiment one iot worſe, no though they ſhould be eſteemed moſt approved horſemen, from whoſe mouthes ſhould come the diſcommendations, for I know what error ſoeuer hapens to a horſe by this manner of teaching, proceedes either from the indiſcretion or ignorance of the rider, and from no part of worke, if it be truly handled; wherefore to thoſe that will credit truth, and obſerue thoſe rules which are moſte agreeable with art and reaſon, I frame my diſcourſe, and to others who ſcorne all guides, but the ſtrength of their owne opinions, I wiſh them ſaue the labour of reading this booke, which in that caſe will giue the no ſatisfaction: and now to my purpoſe, if at any time you wil make your horſe amble by the helpe of the tramel, you ſhal thus doe; take any horſe of what age, condition, or qualitie ſoeuer he be, and firſt place him ſo with your hand, that he may ſtand iuſt and euen vpon all his foure legs without putting any of them forth, or ſtanding ſtradling, or crooked, which done, you ſhal put vpon his right fore leg (which we cōmonly call the far leg) a broad peece of leather, lined ſoft with cotton, & hauing at the one a ſmall buckle, in bredth & ſhape made like a paſtern, only it muſt not be ſo thick & ſtubborn, but ſmooth & gentle, yet very ſtrong. This peece of leather you ſhal buckle about your horſes farre fore leg, ſome 4, or 5. fingers or more about
his

his knee, & you shal buckle it so gently, that by no means it pinch him, or with the straitnes stop the passage of the blood in his veines; also whē it is buckled on, you must so place it that a strong tournel of iron being cunningly fastened within the leather, may stand iust behind his leg, looking towards his hinder leg: this done, you shal take another peece of leather, made in euery proportion like to this former, & buckle it about your horses far hinder leg, some foure inches or there abouts aboue his cambrel, and the iron tournell thereof shall stand before his legge, looking to his fore-legge: then you shall take a strong corde made all of haire, and fasten it to both the tournels, making it by no meanes either longer or shorter, but of the iust and due length which is betwixt his legs; and then looking vpon your worke, you shall see that you haue so linckt his hinder leg to his fore leg, that the horse cannot possibly put forth his fore-legge to go, but he must draw his hinder legge after him. When you haue don thus to his farre fore-legge, and his farre hinder legge, then you shall take other two peeces of leather like the former, and another cord of haire of the same length, like the former also, and in euerie respect as you haue linckt together his right legs, so you shall also lincke together his left legs, which we call his narre legs: then you shall take a peece of garthwebbe, and making it fast to the middest of the haire rope on the farre side, you shall then bring the garth-web ouer the horses backe, and make it fast to the haire rope on the narre side, this garth-web is but onely to hold vp the cordes from falling to the ground, or troubling the horse as he goeth. Now forasmuch as I cannot in wordes so perfectly describe this manner of tramping as may giue satisfaction to those which haue neuer seene it before, I thought good by a more liuely repre-

sentation of these figure therof to better your knowledge in the doing it; wherefore when your horse is trammelled about the knee, he will carrie the forme of this figure.



Many I know will wonder at this maner of tramelling a horse about the knees & houghes, because it hath been seldome or neuer vsed by any man; & for mine own part I haue neuer seene it vsed by others, but haue beene induced therunto out of mine own reason and practise, because the faults & dangers which I can any way behold to belong to tramelling, is if a horse be at first tramelled vnderneath the knees and houghes, and bee of a hot and fierie spirit, if then the Rider indiscreetely shal compell his Horse to goe any thing hastily, or that the horse out of his own furie will not stay the leasure of the man, in such a case the horse may happen at the first setting forth of his feete to

ouer-

ouerthrow himselfe, and then being downe, what with his straining, and the strength of his tramels, hee may get that mischiefe which will neuer forsake him whilst hee liues after. This to prevent I would haue you in any case at the first to tramell your horse aboue knee, as is before shewed you, for in so doing you shall giue his legges that libertie, helpe and nimblenesse, that neither your owne rashnes, nor the horses madnes, shal bring him within the compasse of any euill, as good proote in your triall shall witnesse.

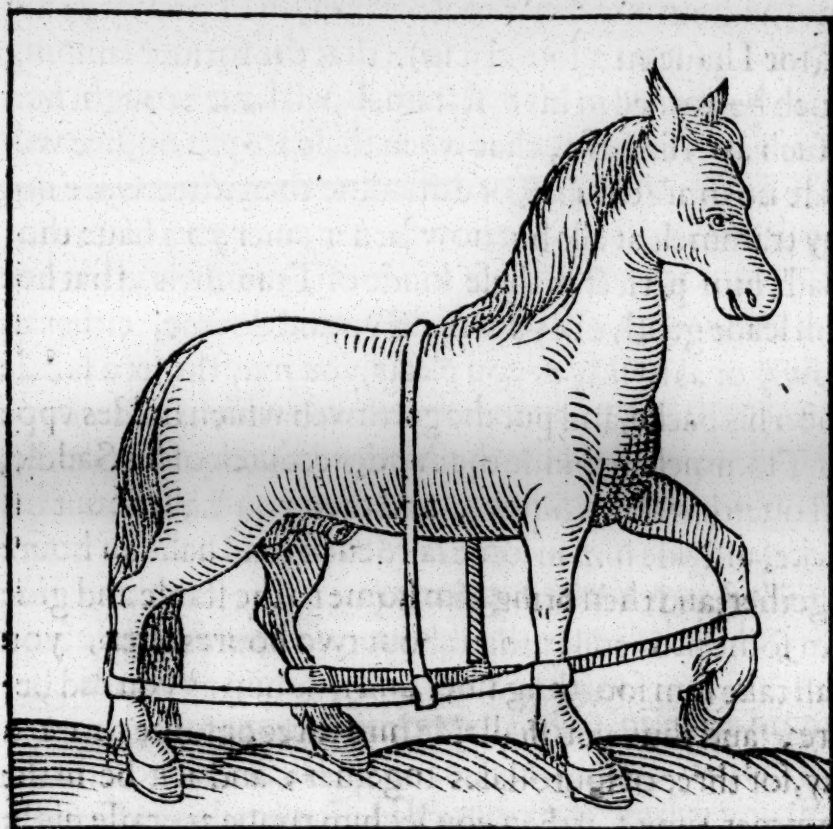
When your horse is thus tramelled aboue knee, which in any case I would haue you doe, either in some emptie barne, or in some faire Greene close, you shal then as gently as you can, lead him forward, & by little and little make him goe faster and faster, till you see him strike into a faire amble, which he cannot chuse but doe, because his feete are so linkt and tied together, that he cannot remoue any of his fore-legges, but the hindmost legge of the same side must follow it, you shall practise him thus, to leade and amble in your hand three or foure times euery day for the space of two or three dayes; then if it be in the sommer time, I would haue you turne him into some close, or conuenient peece of ground (thus tramelled as is before said) and there let him run at grasse for the space of a fortnight, or three weekes, not failing, but euery day twice a day to take him vp, & ride him either vp & down the close, or in some other conuenient peece of ground, for the space of an houre together; in which time you shal see he will get the perfit vse of his legs, & the true stroke of his amble, without stübling or other maner of amazement.

Now you shall vnderstand that this maner of tramelling horses aboue knee bringeth one other commoditie,

and that is it maketh a horte to stretch and put foorth his legs in large strides, bringing both eate and comelin-esse to his pace, and not to twitch them vp sodainly, and let them downe againe as if he did dance, or stood stamping all in one place; which fault onely proceedes from tramelling a horse somewhat too early vnder the knee, and making his tramels for want of true measure a little of the straitest.

After you haue thus practised your horse in the tramels about the knee, and made him both through riding and running in them at grasse day and night, so perfit that he will take his pace forward, both cunningly and speedily, you shal then take them off, and put the leathers which are vpon the fore-legs about the knees vnder his knees about the small of the legs, some handfull or thereabouts about his neather pasterns: and the leathers which were about the houghs of his hinder legs, you shall put vnderneath his cambrels about an handfull about his fetlocks, then you shall take the haire cords, and when the horse stands euen and iust vpon all his foure legs, each leg standing opposite and iust one against another, you shall fasten them of their true length (which is from leg to leg of a side) vnto the iron tournels, as was before said, so that when your horse is thus tramelled vnderneath the knee, he may carry the proportion of this figure following.

When



When your horse is in this sort tramelled vnderneath the knees & houghs, you shall then in the self same manner as you did before when you trameld him about the knee, first with all patience and gentlenesse leade him vp and down in your hand, making him go in his tramels, which will all at the first be very troublesom vnto him & a great deale more vnnimble, by as much as they are of more force and correction then the former, as cōmanding the weaker and more pliant members; but howe vnnimble or vntowardly soeuer hee goes at the first with these tramels, it matters not, so that you be but patient, & indure cuery disorder in him without troble or rigor; for euē the very paine which he shal feel whē he giues any disorderly twitch or straine will so molest and torment him, that he will amend cuerie thing of himselfe (if you will giue him time).

time) without any other molestation, and I perswade my self (for I haue euer found it so) that the former cunning which he learned in his first trammels, will haue brought him to such a perfittnesse, that when these are put on, hee will finde no more trouble, or difficultie then if hee wore not any trammels at all; but howsoeuer, after you haue thus made him perfect in these kinde of Trammels, that hee will leade gentlye in your hand vp and downe, either as slowly or as swiftly as you please, you may thẽ set a saddle vpon his backe, and put the girthweb which holdes vppe his Trammels behinde the hinder crouch of his Saddle, iust ouerthwart his fillets, and then you shall mount his backe, and ride him in some faire euen road halfe an houre together, and then bring him home to the stable and giue him some prouender, then about two houres after, you shall take him forth againe, and ride him as you did before, and thus you shall ride him three or foure times a day, for three or foure daies together; and if it be in the Sommer time; if then you let him runne at grasse night and day with his Trammels on his legges, and ride him as is before described, it wil be much better for his pace; obseruing that during al the time of your riding in this first beginning you put not any thing into his mouth but a plaine, smoothe, and full snaffle, neither shal you by anie meanes giue the horse any chokes in his mouth, or gag vp his head, but beare your hand in an orderlie and constant maner like a horseman, being assured that what soeuer the horse shal commit in his pace or the motion of his legs, the trammels will correct sufficiently without any other assistance. After you haue thus for a fortnight ridden your horse in these Trammels vpon plaine and smoothe grounds, you shall then for the next fortnight exercise him in his Trammels vpon rough waies

rough waies, as where hee may tread sometimes in ruts, or vpon broken swarthes, you shall also now and then ride him ouer plowde lands, and sometimes vp hils, and sometimes down hils, till you haue brought him to such nimblenes and courage in his pace, that no ground hee can tread vpon shall come amisse vnto him, - you shall also this fortnight bring his pace to al the swiftnesse you can; by thrusting him forward with all the life & courage you can deuise, and sometimes by giuing him a good iert or two with your rod, or by giuing him now and then a good stroak or two with your spurs. Thus when you haue brought him to the perfines of his pace, so that he will doe it both cunninglye, readily, swiftly, and without any stammering or straying of his tramels, so that you might verie well aduenture to ride him without any tramels at al, you shal the for a weeke before you take off your tramels (if hee bee a horse which you make for any greate mans saddle) put into his mouth such a bytt as shall bee fit and answerable to the temper, sweetnes or hardnesse of his mouth, & with it you shal ride him in his tramels al that weeke three or foure times a day first vpon plain, smothe grounds, then by little & little, vpon rougher & rougher, til you haue exercised him vpon euerie kinde of ground whatsoeuer, and that hee will take his pace both as readily & as speedily with the bytt, as before he did with his snaffle, neither offering to strike falser, shorter, nor with faster motions then hee did with his snaffle; when you haue brought your horse to this perfection, so that neither exchange of way, nor the exchange of byts or Snaffles moues him to anie disorder; then you may boldly take away his tramels altogether: and onely make good thick thumb-roapes of hay, you shal folde & wreath the as you make a rush ring about the neather pasternes of al your horses foure legs, which is between the coronet of the hoof and the sewerlocks, as you may see discribed in this figure following.



Having thus wispt al his soure legs, and made them that
 they will sticke close and fast about his pasternes, you shall
 then mount vpon him: as you rid him with the tramels, so
 you shall ride him with these wispes, that is to say, the first
 weeke you shall ride him verie gentlie, and onelie keep him
 in a moderate and reasonable amble, suffering him to take
 his pace of his owne accord, without either your ayde or
 compulsion; the next weeke you shall for the first three
 daies put your horse to the swiftnesse of his pace, and make
 him amble out thorowlye, giuing him now and then the
 iert of your rod, or the stroak of your spurs: & the 3. other
 latter daies you shall thrust him vpon vneue & rough waies
 where the hollownes and incertaintie of his treading may
 expresse

expresse vnto you the perfittnesse and nimblenesse of his pace, and in all this fortnights riding, you shall carrie your bridle hand a little more constantlye and firmly then you did before when you vsd the tramels, that you may be ready to helpe the horse, if at any time hee happen to treade false, which I am perswaded he will verie sildome or neuer do, if you rightly keepe the obseruations before prescribed; whē you haue thus exercised your horse with these wispes, and found his pace perfect as before, then you shall take away the wispes from his forelegs, & keep only those about his hinder legs: on still, and so ride him for another weeke, the vertue whereof is that those wispes will both make him keepe his pace, and also cause him by keeping his hinder feete neare to the ground to followe his forelegs close, and make his pace more easie. After you haue finished this weekes exercise also, then you shall take away his wispes which are behinde, and make account that your worke is fully perfited, so that now you may aduēture either to ride or iourney your horse when you please, and whether you please, for be well assured the pace which is thus giuen vnto a horse is the moste certaynest of all other, and will neither alter nor be forgot, either through difficultie or want of practise: for the vnderstanding & maner therof is giuen vnto a horse with such ease and plainnesse, & the faults are corrected so instantly, and with such a naturall comelines, that euerie horse takes an especiall delight and pleasure in the motion, and the rather when he feesles that the pace is (as indeede it is) much more easie to his owne feeling then the trot, and as it were a reliefe vnto him when his ioyntes with trotting are feebled.

Now for as much as there bee sundrie principall obseruations to bee kept and vsd in this manner of practise, for want of knowledge whereof many errors both grow and continue in a Horses doings, from whence hath

risen most of these imputatiōs, which are laid vpon this arte, making the abuse of the art & the art it selfe al one, I will before I proceed further giue you the full knowledge of these rules; that you may be euer the better assured to make your worke perfit. The first therefore is to note well when your horse is first of all tramelled, & comes to strike forth his amble, whether he strike his feet home or no, that is, whether he doe not strike his hinder foot at least sixe inches farther then where he took vp his fore foote, as in the true rule of horsemāship he ought to do (which horse amblers, call striking ouer) you shall then to amend that fault if it bee whilst your horse is trameled aboue the knee, then you shall make the cord of haire, which goes frō leg to leg, a full inch shorter then it was, & it wil make him strike ouer, but if it do not at the first bring his feete to ouergoe one another, but as it were to tread step vpon step, that is, to set his hinder foot in the same place where his fore foote did stand, then you shall strayten the cordes a full halfe inch more, & that will compel them to strike ouer verie sufficientlie. But if this fault of striking short doe not happen whilst the horse is trameled aboue knee, as for mine owne parte, I haue not often seene because the great liberty of his legs makes him naturallye treade forth & take long strides, but that it commeth after a horse is tramelled vnder the knee, which because of the greater cōmaundment, makes the horse treade more short & suddainly, then you shall onely but shorten each of the cordes a quarter of an inch, & it wil be sufficient: for a quarter of an inch when the tramell is in that part, is as much as if you did shorten it two whole inches when it restes vpon the vpper part, and will make a horse strike as far ouer; also if in his ambling you help him by thrusting your legs hard forward stiffe vpon your stirrups, it wil make him bring on his hinder legs, and strike much farther then otherwise hee would doe.

The second obseruation which you shall keepe in your memorie, is to marke if your horse doe not erre in excesse of this former motion, which is to say, whether he doe not strike his fecte to farre ouer, & take such vnreasonable long steps, that he both indangers to ouerthrow himselfe, and also in his abling claps one foot vpon another, which is both noysome to the eares; vncomely to the eie and verie hurtful both for the man and horse, for the man, if hee shall happen to fall, for the horse, if by clapping one foot vpon another, he either bruse or wound his heeles from whence many times growes dangerous diseases, where when at any time you perceiue this fault, you shall first by the temper of your hand carrying it a little straighter then ordinarie, and feeding the horses mouth with gentle motions, you shall make him treade shorter, which if he be a horse of fierce mettal he wil immediatlye doe without anye other helpe, for his owne pride and spirrit, ioyned with the temper of your hand, wil worke all the effect you can wish, but if hee bee a horse of sloathfull nature, and altogether giuen to the loosenesse of pace, then you shall as soone as hee will in anye reasonable good sorte amble in his tramels, put him to amble in rough waies, and after he is grown somewhat cunning therupon, you shall then ride him into some high way which in the winter time, hauing beene rutted & the prints thereof still remaining in the ground all sommer, & there exercise him vp and downe for at the least an houre or two together, and doe thus thrice a day at least, & in one week beleue it, you shall make him treade as orderly and as short as either your selfe can wish, or the easines of that ambling pace, may any way suffer without bringing either disgrace or hardnesse.

The next obseruation you are to marke, is whether your horse in his amble doe not stradle or goe to wide with his hinder feet, which fault is most general and ordinary with al ambling horses whatsoeuer, but if you doe perceiue that

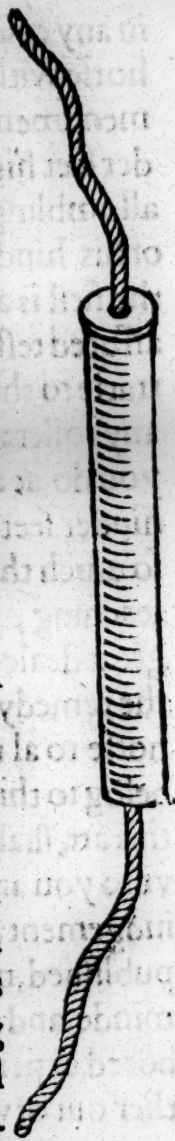
naturally he inclines himselte thereunto, you shall then for the preuention therof (because if once he make it a custom it is almost impossible after to reclaime it) ride him into some great road way, which hauing beene worne & rackt in the winter, wil haue a narrowe deepe path way worne a foote deepe and more; & therein exercise your horse dayly till you perceiue him to amead his fault, and drawe his feet vnto a decent comelines, but if you cannot finde such a rutted way because for the most part they are proper but on-ly to clay groundes, it shal not be amisse then if you get such a straight path or furrowe of some twentie or thirtie paces in length, beeing twelue inches deepe, and but sixteene inches in breadth, and therein ride your horse being tramedled euerie day, till you beholde that his fault be amended; But if it happen contrarie to this motion, you doe obserue that your horse goes to straight with his hinder legs, so that he doth enterfaire, or knocke one foote vppon another, which is a vice sildome found in an ambling horse, yet if at any time it be, it is mooste insufferable, you shall then to amend it whilst you ride him with the Trammelles, haue a small line made fast to the vpper part of his docke, which line shall runne through a long pipe of leather, made round and bigger then a mans arme, which pipe shall come from his docke betweene his hinder thighes, and with the other ende of the small line bee made fast to the girthes vnder the horses bellie, the fashion of which pipe and line is contayned in this figure following.

With

The fourth Booke.

53

With this line & lōg pipe you shal ride your horse whilst you vse your tramels, but whē you take away your tramels, & put on your wispes, then you shal also lay away this pipe & line; & only be sure to make the wispes as thick aga in vpon the inside of the feet as vpon the outside, & there is no doubt to be made of the amendmēt of the euil, except it be a vice so proper & natural to the horses pace, that euen frō his first foaling he hath held it, thē your only remedy is after you haue laid by both tramells, pipes and wispes, to haue an expert Smith, who may shooe him continually with good enterfayring shooes, which if they bee made indeed with good art & courage, they wil keep him opē, & make him tread largely inough, the fashion & property of which shooes shal be shewd more largely in their proper places. The next obseruatiō you are to mark, is if your horse do not take his feet clean & nimblȳe from the ground, but sweep thē so closely alogst the earth, that with stūbling & carelesnes, he oft indāgers both him selfe & his rider, thē you shal ride him with his tramels amōgst thistles, or amōgst short, yong gorsse, or whins, which pricking his legs, wil make him winde thē vp both decently & without fear of stūbling: also, if he be a horse of good corage, it is good now & thē to āble him ouer plowd lāds, or in plain smooth waies, at such time as the nights are darkest, so that the horse cānot discern his way: but if he only in his pace dash or strike his hinder toes vpō the ground, only take vp his fore feet in good order, thē you shal for a weeke or more, ride him with shooes behind, which shal haue little loose rings lingling behind in the spunges of the heeles, and



and they will make him take vp his feete sufficientlie, yet in any case you must take heede that you ride not your horse with these ringd shooes an houre longer then the amendment of his fault, least you make him take vp his hinder feet higher then you should doe, which is the spoyle of all ambling; for I had rather beare with the lowe sweeping of his hinder feet, then with his too hie taking them vp: for the first is a great sign of an easie pace, & this latter is a most assured testimony of very hard treading, which being contrarie to the work you labour for, may by no meanes haue any tolleratiō. Wherefore for a conclusion of this worke if you do at any time obseru that your horse doth take vp his hinder feet to high, you shal the make him weare his wisps so much the longer, and if need be, during the time of your teaching, cause the Smith to make your hinder shooes, a great deale the heauier, & thus by applying to these errors, the remedies which are prescribed, you shal bring your horse to al the perfection & goodnes which can any way belōg to this easie pace of ābling; And if any other tutor in this art, shal either find fault with my precepts, or prescribe vnto you any other material rudimēts, which may in your iudgement runne in opposition with these which I haue published, my desire is, that out of the wisdom of an euen minde, and the true iudgement which shal issue from a labored experiēce; to way & cēsure both our reasons, & neither out of will, nor loue to noueltie, become a prentise to any precepts but those which haue the greatest aliāce both with arte and reason; for no man possible can haue that perfectiō either in this art or any other, which wil not at sometimes bee accompaigned with error. And thus much touching mine experience in this easie Arte of ambling.



CAVELARICE

Q R

*That parte of Arte which containeth the
office of the Keeper Groome of the
Stable, or Coach-man, how horses shall be or-
dered both when they rest and when they
iourney: with all things belonging to
their places.*

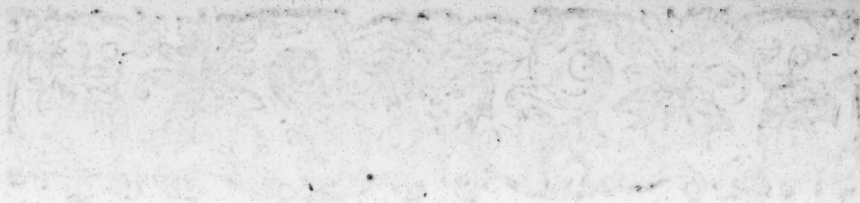
The first Booke.



LONDON

Printed for *Ed. White*, and are to be solde at his shop
nere the little North doore of Saint Paules
Church at the signe of the Gun,

1607.



CAVALARIE

OR

That part of Antiquity contained in the
office of the Knight of the Order of the
Sword or Goshawk, how they shall be or-
dained both when they first and when they
return: with all things belonging to
them by law.

By John Hooker.



373527

Printed for E. M. W. and are to be sold in his shop
in the Strand, North door of Saint Pauls
Church at the sign of the Gun.

1607.



To the moste noble and moste mightie
Lord, Edward Earle of Worcester, Lord Her-
bert of Ragland, Chepstowe & Gower, maister
of the Horse to his Maiestie, & Knight
of the moste noble order of the
Garter.



I Wo strong motiues (Right Honorable and
moste noble Lord) hath imboldned me to of-
fer this part of my labours to your worthie
protection; first your owne not to be contro-
led knowledge in all the best partes of the
Arte; and secondly your place which makes you the greate
maister both of the best horses, and the best professors of the
best Horse-manship; and albe it may be objected against mee
that others of my countriemen haue done so excellentlye in
this subiect, that mine will proue but a surcharge to memory,
yet (vnder the reformation of your Honorable fauour) I sup-
pose they are so much clad in forraigne attire, that their pre-
cepts are fitter for reading then practise; and truly for Gri-
son and other of his ranke (to whome is due all the worthie
prayses that possibly can be giuen) and whose memorie I both
loue and admire) this is mine opinion, that were they liuing at
this houre, and saw but some of the horse men and horses of
this nation, they would confesse that time and perfection had
purgd their skills of many grosse deformities; but of this your
Lordship can better iudge by your owne knowledge the by my
relation, therfore it shall be grace enough for me, if your honor
vouchsafe the viewe of my paines, and please to
number me amongst those which euer will
be prest to doe your honor ser-

uice.



*To al those which either ride vpon their
owne horses or are acquainted with
trauell.*

A Sa horse was at the first created for mans vse & seruice, so I imagine in that creation it was intended that man should in his care and respect of the beast, after his iourney, shew both the thankfulnes of his nature, and the reward due for necessarie imployment: frō whence I gather (and those which either haue beene mounted vpon Iades, or for want of gouernment haue had their horses faile them in their greatest needs) can iudge, how necessarie a thing it is to knowe how a horse should be ordered both in his iourneying & after the end of his labour, in which if I haue in this treatise following, giuen you such sufficient precepts as may both enable your horses, & discharge you of much care and fearefulnesse, I doubt not but whatsoeuer malignitie shall suggest against me, yet euerie vpright brest will both fortifie and defend me, & so much the rather in that howsoeuer I may bee thought obscure, yet I knowe I shall not be found absurde. Farwell,

G.M.



CAVELARICE.

The fift Booke.

CHAP. I.

How Stables shall be made, the seate and commodities.

FOr as much as al horses whatsoever, which be of any worth or estimation, are during the time of their seruiceablnesse for the moste part kept in the house, both because the time of the yere, when their seruice is most needefull, is in the winter season, and also because the vnrulinesse of stond Horses is so great, that they cannot be kept in order or good temper, if they be not continually vnder the commaundment of the keepers hand, I thinke it is fit before I proceede to the office of the keeper, to speake something touching the stable, and such benefits as should perfidlye belong thereunto; wherefore first for the site or place where your Stable should stand, I would wish euerie Horse-maister, according to the abilitie of his power to place his stable

vpon hard and drie ground, hauing a certaine assent or
 ryfing, by meanes whereof conueyance may bee made
 with trenches or finckes to carrie away the pisse, foule
 water, or other wet which shall fall about it. The ayre
 wherein it should stand, would as neare as you can be ve-
 rie temperate and sweete, hauing no marrishes, or cor-
 rupt places about it, especiallye no Swine-sties, for the
 verie smelling and rubbing of swine will breede both
 the *Farcie* and other foule diseases. Adioyning to your
 Stable, you must euer haue either some good Well,
 Conduit or Pumpe, and also some faire Pond or run-
 ning Riuer, the stuffe whereon you shall builde your
 Stable, would if your abilitie will stretch thereunto be
 eyther bricke or other rough stone, and the wall at
 least eightene inches thicke, if you want bricke
 or stone, studd and plaister will serue, or if ne-
 cessitie compell lome or lime and hayre, or any o-
 ther stuffe which is warme and durable. Your sta-
 ble would bee in proportion longer then broade, and
 not as some vse foure square, placing horses on both
 sides the house; which is both ill and vncomely. The
 windowes of your stable must bee vpon that side the
 stable which answers to the horses buttocks, and
 would open vpon the east, that a horse may haue the
 morning Sun: and not as some aduise vpon the north,
 for though it bee tollerable for some one weeke in the
 Summertime, yet it will be moste vnwholsome for all
 the winter after: each windowe about the Stable must
 haue a close shut or false windowe of bordes that you
 may at your pleasure make the Stable as darke as you wil
 and as light as you will, the windowes also would bee
 glased that neither Birdes nor other foule may come
 therein, whose feathers are to a horse both vnwholsom,
 and

The fift Booke.

3

and sometimes poysonous; in the midst of your stable in conuenient place, and against which you may make a lodging for your Groomes, I would haue you builde a hanfome chimnie, where when occasion serues, as either in time of a horses sicknes or sorenes, when medicines are to be made, you may haue a fire, or for the warming, airing, & drying of the horses cloathes, which at sometimes is as wholsome for him as his meate. Now for the plaunchers of your stable, I agree both with M. *Blundeuill* and *Collumella*, that they shold be of the best hart of Oake that can be gotten, but that they shold lye (as they aduise) sloping, which is to say, higher before thē behind, I am vtterlie against it, & holde it of al errors the grossest, as not to be tollerated in any place but in *Smithfield* and amongst Horse-coursers: for first it makes a horse in his standing rest somuch vpon his hinder legs, & that with such painfulness, that it not onely makes him weake pasternd, but also bringes to his legs discales and swellings: it makes a horse also that he cannot lye easily but taketh most of his rest standing, then which there is nothing more vnhealthful, wherfore in any case lay your plaunchers as leuel and euen as you can deuise to lay them, and in anye wise lay the boardes not length waies, that is, from the maunget streight downe to the grub tree, but lay them ouerthwart the horses stall, so that he may stand crosse the bordes: let the grub tree which lies at the neather part of the plaunchers against which the horse wil many times rest his hinder heeles be verie strong, and betwixt three or foure inches higher then the plaunchers, for the plaunchers must be laid euen, & not one board higher then another, yet they must not be so close ioyned together, but that the horses pisse & other moisture may runne through the creuises vnderneath the plaunchers. All along as your sleepers lye

lyeto which you pinne downe the boardes , must a Trench or sincke bee digged , of at least foure foote broad, and about three foote deepe, which may conuay away the horses pisse and other filthinesse, either into some by dyke or Channell; the flore, of your stable which is without your plaunchers, must bee euen with the verye height of your plaunchers, that if your horse atanie time shall goe backward off from the plaunchers, yet hee may still stand vppon a iust leuell. This flore would bee paved with round small pibble. At the vpper ende of your plaunchers you shall place your maunger, , which would bee of verie strong boardes so artificially and close ioyned together that neither dust nor any thing how small soeuer , may scatter out of it. Now whereas certaine olde writers would haue euerie horse to haue a little small locker to himselfe, to eate his prouender therein, I for my part like it not, for a horse as hee eates his meate, will turne his head now and then of one side or other, and then hauing but as it were a little boxe to eate in, each time he lifts vp his head, hee will scatter the one halfe of his meate; and againe, it is the delight & nature of a horse to spread his meate, as thinne as is possible, and so to eate with the better stomack, whereas when you lay it in a thicke heap together, he fallcs to loath it and refuse it; you shall euer raise your maunger at least foure foote from the ground, and not haue it about nine inches deepe, for the higher your Maunger stands, the higher your horse will thrust and beare vp his necke, which will be a good help to his reyne and countenance, for howsoeuer it is an vse in Italie or allowed amongst some of our horsemen, that there should be no racke but that a horse should receiue all his meat downward towards his feet, therby not to strain his necke

The first booke.

with putting it vppward; yet I am of a contrarie opinion,
and would haue a horse to stretch vphis head aloft; &
to pluck his hay out of a Racke about him, knowing that
such putting vp of his head dooth mend his comelinesse
and that taking his hay out of his Racke, dooth not
with blowing vpon it make it so soone loathsome; as
for the supposition of the filth or dust which shold fall into
the horses maine, it is verie idle: for if the Racke be plac'd
right, some small dust (if there be any) may fall vpon the
horses nose, but his maine it can neuer touch; wherfore I
would haue the Racke to be placed of a proportionable
height, answerable to the stature of ordinarie horses, and
let it stand somewhat vpright, leaning as little forward
as may bee. When thus your plachers are laid, and
your Racke set vp, you shall diuide your stable into seuerall
stalles, to the intent that euery horse may lie by him-
selfe, and those stallles shall be diuided at the head endes
with great postes. And if the stable be for great horses,
or yong colts, then from each post to the manger, shall
goe a rounde peece of timber, which hang either in
written chaines, cordes, or strong thongs of leather, so
that it may swinge which way a man will haue it, which
will keepe horses from striking one another: or if they
doe strike, they will defend the blowes: but if the stable
be for hunting horses, or else running horses, then I
would haue you to boorde euery seuerall partition
from the great post vnto the manger, euen to the face
that the horse may not looke ouer it, as well for the
warmenesse thereof, as also that one horse may not gaze,
smell, ney, or trouble one another, all for hunting horses,
and running horses, you shall line also the walles which
are before their face with boords, so that they may not
gnaw vpon the walles, or licke vpon the lime, which is

suffocating & vnwholsome; vpon the outside of each post you shall haue plac'd strong hookes of iron, on which you shall hang euery severall horses bridle, his cauezan & warring snaffle; then you shall haue vpon each side of the post fastned in with staples, round rings of iron, to which while you put on your horses warring snaffle, you shall tie him vp whilest you dresse him; then all alongst the other side of the stable betwene the windowes, shall be plac'd strong peeces of timber, on which you may hang euery horses bridle and saddle, the shall you haue in another place great presses, in which shall be stored all better furniture; then shall you haue shelves whereon to lay your curry combs, shaine combs, dressers, rubbers, chaireclothes, & other cleansing clothes, both wollen and linnen; in other convenient places of the stable shall be plac'd close bins, or hutches for the keeping of prouender, the stable would be seeld ouer head, either with plaister, or lime and haire: in the midst of the stable, or according to the largenesse of the stable, I would haue either one, two, or three lanternes to hang for as they may giue a sufficient light ouer all the stable.

Now for the generall vse of your stable, whatsoeuer *Regesius*, or other ancient *Italian* write, to dissuade you from keeping it close and warme, as supposing that it breeds raw digestion, hurts nature, and ingenders many diseases, yet I would haue no *English* Gentleman to hold the rule in this, for we dayly haue out of our experiences, in keeping hunting and running horses, that there is nothing more healthfull, or breeds in a horse greater strength or abilitie to performe much then the keeping of the stable in a temperate and proportionable warmnesse; but whereas they say noysome vapors and smells in a stable are vnwholsome; to that I agree and would wish

The fifth booke.

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every groom that loveth his reputation to keep his stable as sweete and as neate as is possible by any labour to be effected, and to that ende I would have all those which are keepers of running or hunting horses, whose stronger kind of foode makes their ordure to smell so much the viler, neuer to be without *Sterax*, and *Beniamin*, and twice a day at least by burning some vpon a Chaffingdish and coales to perfume the stable, which to the horse is both wholsome, and delightfull. It is the part of euery diligent and carefull keeper, to haue all his implements, and whatsoever he shall neede about his horse, to be placed in fit and conuenient places, that when he shall stand in need of anie of them, hee may readily finde them: hee shall not suffer any thing whatsoever to be throwne amongst the prouender, or to lie vpon his hay: for a Horse will finde dislike at the least sence whatsoever. Many other observations there are for a diligent keeper, all which shall in their proper places be ampie prescribed vnto him.

CHAP. 2.

Of a travelling horses meate, and the seuerall

kindes, and uses.



According to the opinion of the ancient *Italian* writers (whom I did euer read more for knowledge then practise) the foodes which belog to horses are very many & diuersly compounded, as *grasse*, *hay*, *straw*, *oates*, *barley*, *wheat*, and *fitches*, or *pease fitches*, *beanes*, & *wheat bran* mixt all togidher, or common horse bread which is made

Of Grasse.

standing in the chiefe places are found in spotted haues; Now for the propriety of these foodes; first the Grasse questionlesse is nourishing during the time of sommer, whilst the strength of the Sun abides within it, & is food good enough for many travelling horses, but for staid horses of great pride and courage it is somewhat too cold and moist, and therefore onely to be given phisically, as for a month together in the beginning of sommer, only to strowe therein, which is called the boyle time; and if when you give therein grasse, you give them blades of greene corn; it is passing good also.

Of Hay.

Hay is nourishing, and fills out the bodie, yet it must have some other provender rayned with it, or else by reason of the drinke thereof, it will neither nourish sufficiently, nor digest in convenient time, bulking in the horses bodie, make his bellie greate and unsuitable.

Of Straw.

Straw is a hot drie food, and neither nourisheth nor filleth, therefore it is onely to be given but seldome, as when a horse is new taken from grasse, or when hee is in strait diet for running; more for the clensing and scowring of their teeth, then for any other sustenance.

Oates

Oates are exceeding nourishing, light of digestion, and ingendreth the best blood, and whatsoever either *Galen*, or any of the *Italians* write, wee finde it by dayly prooffe, the best food that can bee continually given to a horse. Now of Oates there bee three kindes; one is a great white Oate, the other a great blacke Oate, and the third a short yellow Oate, called a cut Oate, and although some of our *English* authors prefer the black oat for the best, yet I assure you the great white Oat which is full, and heavy, is the best and most nourishing, of which

The fift booke.

kinde I haue seene in Darbshire some which haue (with-
in a verie little) waide as heane as wheate, next the greate
white Oates, the yellow cur Oate is to bee esteemed, and
the last is the blacke Oate, for of all the thre kinde it is
the lightest and least substantiall.

Now there is a fourth kinde of Oate, which is a Skeg
Oate, which is a small light naughtie Oate, and indeede
is fit for pulpen rather then horses, for it is but one smal de-
gree better then Chaffe.

Barley is colde, and drie in the opinion of Phisitians, Of Barley.
but according to the naturall working of horses, wee
finde it hot, drie, and vsauerie, it nourisheth not at all, but
makes a horse thirstie, full of heart burning, and subiect to
fainnesse.

Now if any man demaund if it haue those faults why
it is vsed so much in *Italy*, I answere, that their Barlye and
ours is of a contrary nature, and doth not offend so much,
yet neither of them both to be esteemed for good prouen-
der, where oates are to be got.

Wheat is the greatest nourisher, but yet a foode that of Of wheate.
altother a horse will soonest loath and forsake, for it suf-
focates and closes the stomack; I haue not knowne it vsed
in any place but in Spaine amongst the *Spaniards*, nor wold
I haue it to be vsed at all, for it is neither needefull for the
horse, nor profitable for the owner, if it bee not onely in
the time of sicknes.

Fitches are a ranke grosse foode, ingendering corrupt Of Fytches.
blood, and vnwholsome humors, and if they bee not well
dried before they be given to a horse, they will breed the
pestilence & burning feauers.

Pease are a purgic & stopping foode, filling vp the wind- Of Pease.
pipes, and disabling the horse in trauell; if they be not ex-
ceeding well dried, they breed in a horse the bots, gubbs,

bowels

R r r 3

and

and all sortes of wormes, together with paine in the stomacke, lunges, and generally all ouer a horses intralles.

Of beanes,

Beanes are nourishing and strong, and highly to be preferred before Pease or Fitches, because if they be giuen to a horse, when they are well dryed they breed good blood, and are more light of digestion, yet whensoever they are giuen they must be mingled with Oates, for to giue them simply of themselves; they are somewhat too cloying, and offend a horse in his eating.

Of blende
corne.

Now for mingling Pease, Beanes, Fitches and wheate branne together, it is a moste vnwholsome prouender, for there is corruption in the Fytches, pursuuenesse in the Pease, & fulsomenesse in the Beanes, ioyned vnto a moste scalding and vnnaturall heate in the Bran, so that I would wish all that loue their horses not to loue this kinde of foode.

Of horse bread

Now lastly for common horse breade, which is made of nothing but chissell or branne backt, it is neither nourishing nor yet wholsome, but is the originall cause of many filthie diseases, as I haue shewd at large in a former treatise, so that were all Horsemen and trauellers of my mind; either Bakers should compound their breade better, or neuer sell any to Inne or Stable, for I will stande to it, that bread made of a the dust of a milne or a barne flore is as wholsom as any that I haue seene come from a common Baker. Now out of these seuerall prouenders to shew you which is best, for which purpose, you shal vnderstand that for your horse for seruice in the warres, or the horse kept for hyc way traueilling, or long iourneyes, your best prouender is Beanes and Oats wel kilne dride & mingled together, as thus, to euerie bushell of Beanes two bushell of Oates; For the hunting or running horse, cleane Oats well kilne dride, or breade made of cleane beanes, as is shewed

The first Booke.

II

shewed in the booke of hunting: For the cart or plowe horse, Pease, Beanes, & Fitches mixt with Barley chaffe, as thus, to a pecke of Pease, Beanes, and Fytches, at least a bushell of Barley chaffe. For the horse that is kept for sale and is in the hands of the Horse-courser, if he be fat, the best foode is a fewer pease or Beanes mixt with oate hulls which are taken from oates when you make Oate-mearl, but if he be leane, olde, or lacke teeth, then either boilde barley whilst it is sweet, or else boild bucke, for both these feede suddainly though corruptly.

Now for the quantitie which you shall allow; I thinke for great Horses, or Princes or Gentlemens priuat saddle horses, which euer should be kept as fat and faire as may be, that two pecks a day is the best proportion; for the ordinarie travelling Gelding a pecke a day is sufficient, and for the Cart or draught horse, your measure must be to fill his bellie before his worke, and after his worke, or else he will giue ouer his labour.

Now if there happen into your charge cyther *Turkes*, *Tenets*, *Arabians* or other cuntry horses, which haue beene vsed to other foodes then these which we imploy in *England*, you shall first as neare as you can, either by inquirie of those which formerlye had the keeping of such horses, or by proofes in your owne practise, learne what foode the horse best likes, and in what sorte he hath beene before kept, and if you dislike either his food or keeping, you shall not alter him suddainlye, but by litle and litle bring him to that dyet you shall finde best for his bodie.

CHAP. 3

*Of the feuerall kindes of Waters, which is best
and which is worst.*



Having in mine imagination tolde you sufficientlie what foode or meate is best, and moſte naturall for a hordes bodie, it reſteth now that wee tell you what drinke alſo is fitteſt, which by the opinion of all men, & the rule both of kinde and cuſtome is onely water.

Now for as much as there be diuers and ſundry kindes of waters, as namely the cleare ſpring, or fountaine, the Pond, and the running riuer, and for as much as euerie one of theſe according to their ſcituations ſo doe alter in their properties, as the fountaine which dooth come from the rocke is ſmalleſt and moſte ſcowering; that which comes from chalke, liſtſtone, or ſalt-water moſte nourishing, & that which comes from brimſtone or Sulphure moſt corrupt & poyſonous: ſo of Ponds that is fed by a freſh ſpring is ſmalleſt, that which is fed by the land flood beſt nourishing, and that which is onely maintayned by rayne water is moſt infectious.

Laſtly of riuers, that which come from a cleare ſpring, and runnes vpon ſand or pibble, beeing verie ſhallowe is euer the ſharpeſt: that which in his running clenſeth common ſhoares, and beares away corruption is the beſt feed: but that which is deep, muddy, comes from bogs, and runnes ſloweſt, is naught and offenciue. Wherefore if your horſe be fat or ſubiect to groſenes, your beſt water is either the Spring which comes from the rocke, the Pond which is fedde by a freſh fountaine, or the ſhallowe brook which runnes vpon pibble, for they clenſe the bodie and
raines,

Water for a
fat Horſe.

reynes purge the kidneys, and coole the blood if it bee inflamed: but if your horse be leane, olde or tender, then your best water is either the fountaine which comes from chaike, limestone, or from the seas saltnesse. The ponde which comes of the land flood being cleared by standing, or the riuer which cleansing cities or great townes, makes himself cleare with his running; for these hauing in them a mixture, or compounded strength, are the pleasantest and most nourishing. In the sommer season your running fountaine is the best, for it is the coolest, and in the winter your deepe Well water is best, for it is the warmest.

Now there bee of our English writers which would haue your horse to drinke verie much; and if hee bee not naturally inclined thereunto, to rubbe his mouth with salt and wine, to make him thirstie; but it is a most vilde precept, for the lesse a horse drinckes at one time, the better it is, for many surfeits are taken by drinke, but few or none for want, and therefore if you see your horse subiect to drinke much, you shall then water him the oftner, that he may not drinke much at once. To gallop and chase a horse gently after his water, is the wholsomest motion that may be, for it keeps him from cold, and dropnies, and disperleth the cold vapor of the water through his bodie, and recovers his stomacke.

Now, for letting your horse stand any long time in the water vp to the knees, as many horsemen doe, I for mine owne part like it not, for it numbs and cooles the legs too much, & makes the horse apter to surbait: only whē you shall perceiue your horses coddles or sheath to swell, then I would if it be in the heate of sommer haue you to swim your horse once a day either ouer some deepe riuer or in some deepe pond; but if it be in the winter, then I would only haue you to bath his coddles & sheath with cold water, in the stable.

Now lastly, if you haue the charge of great horses, who out of their coragious spirits are not easlye to bee led, the best is euer to water the in the house: but if your charge be of iourneying geldings, then tis best wating them abroad, and to chafe them a little in your hād vp & down after their water. And thus much for water and the vses.

CHAP. 4.

Of the dressing, combing, and currying of horses, and of their diet in the time of rest.

O enter into any phisicall distinctions or allusions of dressing and currying horses, comparing the with the six seuerall kinds of frictions belonging to mans body, or to repeat vnto you vke-lesse obseruations, prescribed by the anciēt *Italians*, which neither agree with our clime nor the conditions of our horses, were a labor vaine, and a greate depriuing of the industrious keeper of his best knowledges; wherefore that I may in the plainest maner I can, vnfold what necessary precepts belōg to the office, I thinke it not amisse to begin after this maner: First after your horse is taken into the house, you shall put vpon his head a strong coller of broad double leather, with two reynes of leather, or els round writhen chaines with short links running easily through holes made for the purpose in the vpper great tree of the maunger, in such sort that when the horse puts downe his head, the chaines may fall downe to the ground; and when he thrusts vp his heade, they may rise to the top of the maūger: now the first night that your horse is brought into the house, you shal onely giue

The fift Booke.

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giue him a bottle of wheate straw into the rack, and so let him stand without litter, or any thing els for that night he will doe nothing but emprie his belly of grasse. The next day about nine of the clocke in the morning, you shall take a double rope made of wheate straw twound exceeding hard together, and with it rub his head, face, necke, breast, body, bellie, buttocks, and legges, then you shall giue him as much water as he will drinke (and a fresh bottle of wheate straw if the other be eaten) and so let him stand till foure of the clocke in the evening, at which time, as you did in the morning, so you shall then rubbe him ouer with newe ropes of strawe: then water him, giue him fresh strawe into his racke, and let him stand till eight a clocke at night, at which time you shall take a great bottell of wheate straw, and spread it vnder his bodie, laying it thickest before his fore-legges, both because his heade may haue as it were a pillowe to rest vppon, and also because horses naturallye will with their fore-legges put the straw backwarde. This is called littering of Horses: and when you haue thus done, you shall let him rest till the next morning.

The third day I woulde haue you come to your Horse at seauen of the clocke in the morning, and the first thing you doe after you haue opened your Windows, and washed your owne handes, you shall take a shakeforke, that is to say a forke of wood without any iron about it, and with it you shall shake vp and thrust backward all the horses dung, and wet litter, putting it from the planchers; then you shall shake vppe all the drie litter which is ynsoylde, forward: and with your shakeforke thrust it vppe as hard as may bee vnder the mawnger; then with a shouell well shodde with yron for the purpose, you shall shouell away all manner of filthinesse

Water for a
leane horse:

from the planchers, and then with a beesome either of Birch, or Broome, you shall tweepe the planchers and stable so cleane as is possible, and so gathering all the filthinesse into one place, put it cyther into a Barrow, or Basket, and carrie it into such backe places as are for such a purpose. This done, you shall bring into the stable a Peale full of faire water, and place it hard by the hinder part of the stall where the horse stands: then you shall take a watering snaffle, and a headstall, and after you see that the snaffle is cleane without dust or filthinesse, you shall dippe it into the peale of water, and then put it into the Horses mouth, and so turning him about, that hee may stande with his heade where his taylor did stande, you shall with a seperated reyne tye vpp the Horse to the two Ringes, which are fastened into the postes of each side him: this done, you shall take your rope of strawe well twound together, and therewith first rubbe the Horses face and checkes all ouer, then with your finger and your thumbe, you shall twitch away all those long and stiffe hayres which grow close about his vpper eye breees, and close vnderneath his neather eye breees, for they hinder sight: you shall likewise pull away all those long hairees which growe about his nostrelles, vnderneath his chappes, and downe his necke to his breast; then as you did before, you shall first rubbe the right side of his necke, his brest, right shoulder, and right legge, the right side of his bodie and bellie, the right buttocke and the right legge, and then you shall goe to the left side, and in all things do as you did vpon the right side. This done, you shall take a greate Sponge, and hauing put it into the water, you shall take it soorth, and presse it a little, then therewith you shall rubbe ouer your horses face,

face, then lay by the sponge, and with your handes rubbe his face till it be as drie as may be, then wash your handes cleane againe, for there will come much filth and durtinesse from the horse; and take the wet sponge and rubbe the right side of his necke therewith; then with your hand rub that parte drie againe also, and thus rubbing euerie severall part of his bodie with the wet sponge as you did with the twound strawe roape, and drying them againe with your hands, you shall bring away all the loose haire which are about his bodie: this done, you shall picke his sheath cleane from all durtinesse, and you shall wash his cods and make his yarde cleane, then you shall lift vp his docke, and with a cleane cloath rub his tuell and the partition of his haunches, then you shall take hogs grease, soote, and a little tarre mixt together, & dipping a cloath therein, annoint all his foure hooves, or for want of it, you may rubbe his hooves with the vpper skinne of bacon for it is verie good also; then you shall take a yarde of haire-cloath, and rubbe his head, necke, brest, bodie, buttockes and legs all ouer therewith. after it take a housing cloath made of Sack-cloath of such largeness, that it may lappe ouer before his brest, and with a fursingle both broad and flat, gird it about him, putting halfe a dozen soft wispes betwixt the cloath, and the fursingle vpon the top of his backe, and halfe a dozen likewise betwixt the cloath, and the fursingle of each side of his heart iust behinde the el-bowes of the horse, which doe not onely keepe the horse warme, but withall defend the fursingle from pinching or galling, if it bee either hunting horse, or running horse you keepe, then you shall for warmeness sake wisp the fursingle round about, yet you must be verie circumspect that your wispes be made verie soft, great and flat, & not as I haue seene amongst some that are esteemed cunning.

so little & so hard twisted together; that after a horse hath bene laide down, you may see the print of his wispes in his sides when he is bared, which both puts the horse to great paine and makes him more vnwilling to lie downe when he is wearie.

Now there be some in this land which cannot indure to haue their horses cloathed at a ; & therefore happily wil dislike this precept of mine for the cloathing of Horses, saying it makes horses too tender, & takes frō the abilitie of induring hardnes, to them I say they are exceedingly much deceiued, for it is only those hard customes which makes thē vnable to indure any hardnes at al, & the reason therof is this, that nature by such hardnes, & extremity being put to her vitermost force & strength, to maintain her liuelyhood, whē that hardnes at any time is exceeded, she presētly faints & forgoes al her vigor & vertue; as thus for example: it is as much as nature can wel doe to maintain a horse in any good state & strength, without cloathes in the stable: if then by extremity he come to be compeld to liue without cloathes in the fiede in the extremitie of cold & bitter weather, hauing indured his vitermoste before, now feeling it exceeded, he presently growes faint, sick, & oft times dyes suddainly, whereas on the contrarie parte, when nature is cherrisht & fortified by the helpe of housing, cloathing and such like, he gathers that strength and powerfulness that no extremitie can daunt him, the experience wherof we see dayly amongst hunting horses, & in their extreame matches. Againe, to come to a more familiar example, let vs looke into our owne constitutions, what creature is kept more hard, both for hunger and colde then the plowe Clowne, and who more daintie & voluptuousse then the Gentleman? yet bring them both to one equall extremitie, and one Gentleman will both

both indure and bee seruifable, when a hundred Clownes will die like ſheepe in a rotte yeare, be-
cauſe the ſtraightneſſe of their liues kept Nature e-
uer leane and in weakenefſe: and of this, when I
was a poore commaunder in the warres, I euer tooke
a principall notice; and held it for a maxime, that the
more choiſe eyther man or Horſe is kept in the time
of reſt, the more hee ſhall be able to indure in the time
of trouble. When you haue cloathd your horſe vp
as is before ſpecified, If hee bee a Horſe of anye e-
ſteeme, it ſhall bee good if you haue a hood for his
head and necke made of Sack-cloath alſo, which you
ſhall tye to the noſeband of his collor, and to that
parte of the Surſingle, which is ouer his backe: when
all this is doone, if hee bee a horſe that will not bee
quietlye lead abroad, then you ſhall bring him a
peakefull of verie faire water, and let him drinke his
fill, then hauing both with a hard wiſpe, and a cleane
cloath made his maunger verie cleane, you ſhall
take off his Snaffle and turne him to the maunger, then
washing the Snaffle and hanging it vppe, take halfe a
pecke of Oates, and putting them into a meale ſiffe,
duſt them verie cleane, and giue them to the horſe to
eate, then put a bottle of Wheate-ſtrawe into his
racke; ſweepe the plaunchers and ſtable verie cleane a-
gain, then lock vp the dore & let him reſt till it be twelue
a clocke. At twelue a clocke you ſhall come into the ſta-
ble, & firſt you ſhal make cleane the ſtable & plaunchers;
the dipping his watering Snaffle in ſome faire water, you
ſhall put it on his head, and turne him about as you did
in the morning; then you ſhall take a ſharpe payre of
colling ſheares and colle the inſide of both his eares, as
close to the ſkinne as may bee, and the vpper parte of

his

his maine next his eares, from the noddle or Crowne of his head downward into his maine, for the bradth of three fingers, if hee bee a greate horse or traueilling gelding, but if he be either hunting or running horse, then for the length of sixe inches, both because his hayres shall not flie about his face as he gallops, and so trouble him, nor yet cause him to sweate about his eares, to which a horse is too much subiect. When you haue cold his eares and maine, you shall then looke about his chaps, and if he be subiect to much haire or roughnesse in those partes, you shall then clippe it close away that thereby you may the easilyer feele the kirkels, and grosse matter which is about the roots of his tongue, by which you know when a horse is cleane, when not cleane, when he hath a colde & whē no colde. Lastly, you shal take his taile in your hand, & stretching it down straight by his hinder leg with your sheares, clip it close by the vpper part of his hinder heele, then taking a wet maine combe, & a wet sponge-combe, first his fore top downe, then his maine, and lastly the vpper part of his taile from the setting on therof, to the vttermost end of the short haire. When this is done, & your stable swept and made cleane againe, it will bee at least past three a clocke, at which time I would haue you fetch in a cleane peale of water, and place it as you did before, then put your great sponge therein, and your main-comb also; then lay your writhen straw roapes, and your hayre-cloath in some place adioyning vnto you, then pull your wispes one by one from your fursingle, and open euerie wisp, and mixe the straw with the litter, & not as sloathfull keepers doe, make your wispes last a weeke together, so that a horse had as good lie vpon stones, as vppon such wispes; then you shall vn buckle your fursingle, and roule it vppe, that it may bee flat and smoothe, then take off his
cloth

cloath, and going fourth of the stable, shake it, and dust it verie wel, then lapping it vp, lay it by, & as you did dresse, trim, and picke your horse in the morning, so shall you without fayling in any one point dresse him in the evening, and cloath him againe as before, then combe down his fore-top, his maine, & the vpper part of his taile, with a wet maine-combe; then water him, and giue him pro-uender, make cleane your stable and plaunchers, giue him straw into his racke, and so let him rest till eight a clock at night, at which time you shal litter him, and so let him rest till next morning.

These three daies being spent in this order, your horse will haue emptied all his grasse, and his bellie will bee taken vp well within his ribbes, so that now you may both alter his keeping and dresing; wherefore the fourth day by fixe a clocke in the morning, I would haue you come into the Stable, and as you did the former daies, first shake vp his litter, and make both cleane his racke and mawnger, bring in your cleane water, wet his watering Snaffle, put it on his head, turne him about, tie him vp, pluck out his wispes, folde vp his surfingle, and take off his cloath: then you shall take a Currie-combe made answerable to the coate and skinne of your horse, as thus: if your horse haue a thicke rough coate and a foule skinne, then the teeth of your Currie combe shall bee made somewhat long and sharpe, if his coate bee smoothe, and his skinne cleane, then the teeth shall keepe their length, but be fyld verie blunt, but if his coate be like a Mouse-coate exceeding thinne and smoothe, and his skin verie tender, as for the moste part, *Barbaries*, *Jenets*, and *Turkes* are, then the teeth shall be verie thicke, yet both short and blunt. With your Currie-combe in your right hand, and your face being placd against your horses face, you shall lay your left

hand vpon the side of his bridle, and fetching your stroake from the roote of the horses eare, to the setting on of his necke to his shoulder, you shall currie him with a good hard hand, not leaving anye part of his necke vncurried, then turning your face about, and placing the side of your bodie to the side of the Horse, laying your left hand vppon his backe, you shall fetch your stroake from the toppe of his withers, downe to the neather parte of the pitch of his shoulder, and at every second or third stroake, you shall strike your combe before and about his brest, and thus you shall with a more moderate and temperate hand, currie his shoulder, halfe brest and legge downe to his knee, but in anye wise no lower; then you shal with a like moderate hand, currie his backe, side, flanke and that part of his bellie where his garthes rest, as for the chine of his backe, and the barre parte of his bellie nexte vnto his sheath, that you shall currie with such a gentile and light hand as is possible; then with a hard hand againe you shall currie all his buttocke and thigh close downe to his Cambrels but no further: hauing doone thus much vppon one side, you shall then currie him as much vppon the other side.

Now you shall obserue, that whilst you currie your horse, if hee keepe a fridging vp and downe, or offer to bite, strike, or bee impatient, that then it is a signe your currie combe is too sharpe, and you must amend it, but if you finde his vncomelinesse onelye proceedes from ticklishnesse or delight, which hee takes in the friction, you shall then euer when you currie him haue a smal sticke in your left hand, & with it correct him for his wantonnes. Hauing thus curried him all ouer the bodie, and rayld vp the dust, you shall then take a dead horse tayle naild about
a handle

a handle of wood, and with it strike off all the dust which your currie combe raised vp: then you shall take a round rubber, which rubber is a round peece of woode all stucke as thicke as may bee with round tuftes of Swynes bristels cut close and euen within a strawe bredth or more of the woode, and hauing a loope of leather on the backe side, through which you must thrust your hand, so that the rubber may lye in the verie ball of your hand. This rubber (but that it is round and the bristles shorter) is in all pointes like a common rubbing brush with bristles, such as are vsd about foule garmets: with this rubber you shall curry your Horse ouer in all pointes as you did with your currie combe, onelye your hand shall carrie all one weight and temper, and if your horse be so finely skind that he will not indure any currie combe at all (as there be many) then this rubber shal serue instead thereof. When you haue thus gone ouer him with your rubber, you shall then with your horse tayle strike away the dust the second time; then you shal take your wette sponge, and first wetting his face and cheekes, you shall then with your handes rubbe it drye againe, and not leaue whilst you discerne a loose hayre to come away: then you shall looke about his eyes, his nostrels, vnder his cliaps, and about his foretoppe, and if you finde anye superfluous hayres or otherwise, which growe out of order, you shall eyther plucke them away, or with your Sizers cut them in order. This doone, you shall with your wet sponge and your handes goe ouer all his bodie, not leauing whilst anye loose hayres will come away (as was declared vnto you in the third dayes dressing) you shall with your wette handes rubbe his eares, both within and without also, first making them wet, and then rubbing them drie againe: you shall also

not omit with your wette handes , to clense his sheath, his yarde and his cods. This done, you shall take a cleane wollen cloath of cotten, and therewithall beginning at his face, you shall so proceede and rubbe the horses necke and bodie all ouer, especiallye betweene his forelegs or fore-boothes, vnder his bellie, betweene his flanke and his bodie, and vpon the chine of his backe; then you shall take a hayre cloath, and therewithal rub him al ouer likewise, but especiallye in the places before rehearsed: this beeing done, you shall spreade your hayre-cloath ouer his buttocks, & then lay on his cloath vpon him againe, & hauing girded the surfingle, you shall stop him with wisps as was before declared: then you shall take a wet maine-comb & combe downe his fore-toppe, his maine and his taile, then you shall take a peale of faire water, and putting his taile therein close to his midde sterne or docke, you shall with your hands wash it verie cleane, then taking it out of the peale, you shall wring out al the water from the haire into the peale againe, then you shall tye vp his taile in ten or twelue seuerall hankes, that it may drie againe; this done, you shall take such hard writhen straw-roapes, as was before declared, rub and chaffe exceedingly both his forelegs from the knee downward, euen to the crownets of his hooves, and likewise his hinder leggs from the cambrels to the hooves also, picking and rubbing his fewterlockes with your fingers, leauing neither dust, dirt, nor anye skirffe within them, then rub both with the roapes & with your hande his pasternes betwixt his fetlockes and his heeles, then take a hayre cloath kept onclie of purpose and as you rubd his legs with the hard roapes, so rub them with the hayre-cloath also, then take vp his feete, and with an Iron made for the purpose, picke all his fouge, feet betweene the shooes and his hooves as cleane as may be, then

then stop them close and hard either with cow dung, or else with hogs-grease and branne molten together; then annoint the outside and cronets of his hootes with the ointment before declared, then washing your hands cleane combe down his maine & taile with a wet maine-comb, then water him, and so turne his head to the maunger, and put on his collar, then if he be a great horse, you shall sift in a siffe halfe a pecke of Pease and Oates mingled, or else cleane Oates, which is the fourth part of his allowance, and the maunger being made cleane, giue them him to eate, but if he be but an ordinarie Gelding, then a quarter of a pecke is sufficient, which is the fourth parte of his allowance also, and whilst he is eating his prouender you shall make him a bottle of sweete hay somewhat bigger then a pennie bottle in an Inne, and put it into the racke, then sweeping the stable cleane, you may let your horse rest till noone.

Now if it bee either hunting horse or running horse that you keepe, you shall when you are readie to depart out of the stable put downe the litter vnder your horse, and then shutting the windows close, depart: In which absent time you must busie your selfe in making your hay bottles, or strawe bottles for litter, or if your horse be too fat & purfie, by blending wheate-strawe and hay together for your horse to eate, or providing such necessarie implements as are to be vsed in the stable. At twelue a clocke at noone you shall come into the stable, and first hauing swept it, & made it verie cleane, you shall then take a faire linnen cloath, white washt, and therewith first rubbe your horses face and necke, then turning vp his cloath, rubbe downe his buttocks, his flanks, and leskes, then turne his cloath downe againe, and then with warme beefe broth (which is euer wanting in great mens houses) bathe his foreleggs.

12. at noone

from the knee downeward, and his hinder legges from the cambrel downeward, but if you want beete broth the take Traine-oyle, Sheepes-foot oyle, or Neates-foot oyle, for any of them is verie foueraine, either if your horses legs be stiffe & vnnimble, or if they be subiect to swel, or if his grease haue beene molten into them. When this is done, you shal sift him into a siue another halfe pecke or quarter of a pecke of oates, according to your allowance, and giue them him to eate; then hauing made cleane the stable, let your horse rest till three a clocke in the afternoon.

Now you shall vnderstand, that if your horse be of a tender and daintie stomack, and that he is verie apt to growe gaunt, & to loose his belly, or if he be leane, then I would haue you to offer your horse at noone a little water also, but not otherwise; at three a clocke in the after noone I would haue you as soone as you haue made your stable cleane, to vncloath your horse, and to currie, rubbe, pick, dresse and trimme your horse in euerie point as you did in the morning: then to water him, and to giue him another fourth part of his allowance of prouender, and another bottle of hay, and so to let him rest till eight a clock at night, at what time you shal come to him- and in al points as you vsd him at twelue a clock at noone, so you shall vse him at that time; then putting downe his litter, & making his bed, & giuing him the last fourth part of his allowance of prouender, & hay to serue him for all night, let him rest til the next morning. After the order that you haue spent this day, you shal spend euerie day whilst your horse rests without exercise, that is to say, dressing him twice a day, morning and euening, and feeding him foure times a day that is, morning, noone, euening and night, as for his water it must be according to the constitution of his body: If he

3 meals a day.

at night.

he be fat and foule, twice a day is sufficient: if of reasonable temper thrice: if leane and weake, then foure times. Euerie keeper shall obserue by no meanes to come to his horse suddainely or rashlye, but first to giue him warning by crying *ware I say*, or *Holla*, or such like wordes: he shall neuer come or stand directly behinde a horse, but alwaies vpon one side or other; if your horse be of bolde or fierce courage, you shall euer keepe a paire of pasternes made of strōg double leather, & linde with cottē, put through two tournels fixt to a chaine 12. inches lōg, about his foure legs vnderneath his fetlockes: if your horse haue a qualitie that hee will either teare his cloath or pull his wispes out of his fursingle, you shal then tie a lōg stasse alongst his neck, the one end being made fast to his collar, hard by the roots of his eare, the other end to the fursingle close by the vpper wispes, so that he cānot writhe or turn his head backward; if your horses maine be too thick or ilfauouredly growne,— you may with a tasser made of Iron with three or foure teeth, make it both as thinne as you please, and lay it vpon which side of his necke you please. And thus much for the dressing and trimming of a horse, during his time of rest: which method if you diligently obserue, you shal bee sure to haue his coate as smoothe and flecke as glasse, and his skinne so pure and cleane, that (did you rubbe him therewith) he would not staine a garment of veluet.

CHAP. 5.

*Of a Horses labour or exercise, and how he shall be ordered
when he is iourneyed.*



Vnder this title of Exercise I intēd to figure those moderate and healthfull motions which increasing the naturall heate of those mouing partes which sustaine the body, giue both strength and liuelyhood to all the inward Organs and vessels of life, as when a man either for his owne practise, or to continue his horse in those lessons which he hath formerly learnt, or when hee would procure his horse an appetite, or giue him the benefit of the fresh aire, he doth in the morning ride him not till hee sweate, but till hee haue brought him to the point of sweating, and this exercise doth the moste belong to great horses trained for seruice in the warres.

Now vnder this title of Labour, I comprehend all necessarie trauell or iourneying, wherein being drawne by our worldly businesse we are forc'd to trauell our horse both to the decay or hazard either of his strength or courage.

Now for these two, namely Exercise which doth the more it is vsed bringe the horse more strength & vigor; & labour which the more it is vsed, the weaker & fainter it makes him, doth belong two seuerall orders of gouernment or keeping; if therefore your charge be the keeping of a greate horse whose exercise is but to bee ridden an houre or two euerie other morning, you shall thus prepare him therunto: at eight a clocke at night, which is the
night

night before your horse is to be exercised; after you haue made cleane your stable, rubbed your horse with your cloathes, and littered him, you shall then fitt him a double allowance of prouender, that is to say, that which is due to him at that time, and also that which hee shoulde haue the next morning; then looke what hay you did ordinarily allow him other nightes, you shall nowe giue him halfe so much this night, and so let him rest till hie of the clocke the next morning, at what time as soone as you ise (hauing made cleane your stable,) and put vppe his litter, you shall wette his warring snaffle, and put it on, and turne him about, then loosing his sur-single, and taking off his cloath, first with a haire cloath rub his face, necke, and bodie, all ouer, then with a wollen cloath, and a linnen cloath doe the like, especiallye rubbe his legges passing well; then take his Saddle, hauing three girthes, and a paire of sufficient stirropes, and stirroppe-leathers, and set it vpon the horses back in the due place, that is (if the horse bee not low before) rather more forward then backward, and gyrdle it on in this manner: take the girth which is fast to the foremost tabbe of the right side, and buckle it to the hindmost tabbe on the left side, and the hindmost girth on the right side to the foremost tabbe on the left side, and the middle girth to the middle tabbe on both sides, and this is called crosse gyrding, being the comeliest, surest and least hurtfull manner of gyrding, for it galles the least, and holdes the saddle fastest: you shall not at the first gyrdle the gyirthes hard, but in such sort that the horse may feele them and no more: this done, you shall buckle on his breast-plate, and his crooper, making them of equall straitnesse: then you shall lace on his sizer or docke, and make fast his twinfell to the hindmost gyirth on the left

side, then with a wet maine-combe, combe downe his fore toppe and maine, and then throwing his cloath ouer him, let him stand till you haue warning to bring him to his ryder, at what time you shall take his bytt, and hauing both the Chaule-band, and the nose band open, and the Kurbe loose, you shall first wet it in a peale of cleane water, then laying the reyne ouer your left arme, you shall take the vpper part of his head-fall into your right hand, and laying the mouth of the bytt vpon your left hand betweene your thumbe and your little finger, you shall put the bytt to his mouth, and by thrusting your thumbe and little finger betwixt his chappes, compell him to open his mouth, and to receiue the bytt which by obseruing this order hee can, neither will nor chuse but doe: when the bytt is in his mouth, you shall then buckle his noseband, chaule-band, and Kurbe in those due places, as you haue seene his ryder formerlye doe; then you shall wete his foretoppe, and winde it vnder the fore-head band of his headstall: then hauing combed his maine againe, and drawne his garthes to their places, you shall buckle a paire of large close spectacles made of strong leather before his eyes, which will occasion him to leade quietlye: then with your right hand you shall take him by the left side of the headstall close vpon the Portsmouth, and with your left hand holde both the reynes close together hard by the bytt, and so going close by his left shoulder, leade him either to the blocke or to such place as the ryder shall thinke conuenient, then as soone as the ryder hath put the reynes ouer the Horses necke, you shall presentlie shift your right hand to the right side of the headstall, and laying your left hand vpon the right stirroppe leather, you shall whilst the ryder mounts the

The fift Booke.

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the horses backe, stay the Saddle, that it swarue not, then when the ryder is seled, you shall vn buckle the spectakles, and take them away, referring the Horse to the discretion of the Ryder.

As soone as the horse hath beene exercised sufficientlie, and is brought home, the Ryder shall no sooner dismount his backe, and deliuer him into your hand, but you shall first vnloose his Kurbe, and then presentlie leade him into the Stable, for of all thinges I cannot indure this walking of Horses, knowing that it was a custome first foolishlye inuented, and nowe as vnprofitablye immitated; for there is not anye thing which sooner makes a Horse take colde, or breeds worse obseruations in the bodie then this cooling of Horses by walking. When you haue brought your Horse into the Stable, where you must haue formerlie prouided greate store of drie litter, turning his head downe from the maunger and hanging the reines of the bytte vpon some hooke for the purpose, you shall first rubbe his face, then his necke, fore-bothes, bellye, flanks and legges with drye strawe, so cleane as may bee; then with a Wollen cloath, you shall rubbe him all ouer againe, not leauing anye place which hee hath wetted with sweate till it bee as drie as may bee, then you shall loose his garthes to their vtmoste length & thrust round about betwixt his garthes and his bodie as much drie strawe as you can conuenientlie get in, then vnlace his saker and take it away, rubbing the docke of his tayle drie with a Wollen cloath, then cast his cloath ouer the Saddle, then take off his bytt and put it into a peale of water, then wash his wattering Snaffle, and put it on, tie him to the ringes, and so let him stand for at least two houres, during which time you shall

*Walking of a horse
vntill hee is dylowd*

take his bytte out of the water, and with a drye linnen cloath rubbe it as drie as may bee, and then hang it vppe: you shall also wipe his saker within, folde vp the strings, and lay it by also.

Now when your horse hath stoode vp thus vpon his bridle at least two or three hours, & is sufficiently cooled, you shal then come to him, and first taking off his cloath, you shal loose his garthes, and take away his saddle, which done, you shal first with drie straw, and then with drie cloathes rubbe his backe till there bee not one wet haire left, then you shal lay on his cloath againe, and girding it slacke with the suringle, you shal stoppe him rounde about the bodie with great wispes: then you shal with hard wispes of straw, and woollen cloathes, rubbe all his foure legges exceedingly, then combe his maine and taile with a wette maine-combe, take off his snaffle, turn him to the maunger, put on his coller, siff and giue him his allowance of Oates, and putting a bottel of hay in his racke, let him rest with his litter vnder him till the euening: then you shal hang the Saddle where the Sunne shines hottest that the pannel may drie, and if the Sunne shine not, then you shal drie it before the fire, and then with a smal sticke beate the pannel, and make it softe; you shal also rubbe the stirroppes, stirropp-leathers, garthes, and euerie buckle about the saddle exceeding cleane: then in the euening about foure of the clocke you shal currie, dresse, rubbe, picke, annoynt, water, and feede him as hath beene formerlye shewed you in his dayes of rest, keeping euerie tytle, and euerie obseruation.

Now if your horse be not for exercise but for labour, and iourneying about your worldye businesse, you shal then thus prepare him, first the night before you are

to take your iourney about eight of the clocke, as soone as you haue made cleane your stable, rubd and littered your horse, you shall first giue him as much watter as hee will drinke, then a double allowance of prouender, and as much hay as he will conueniently eate, then you shall anoint all his four leggs with traine oyle, and see that his shooes be good, strong, rough, easie, and his feet wel stopt, and so let him rest till verie early in the morning, at what time you shall currie and dresse him as sufficiently as in anie of his daies of rest; then you shall gird on the saddle, in which you meane to ride, which would bee both easie, light and square: easie for your owne seate, light that it may not suddainly make the horse sweat, and square that it may not pinch, gall or wound him: when hee is saddled, you shal giue him a little water, but nothing nere so much as he would drinke, and his full allowance of prouender, which as soone as he hath eaten, you shall bridle him vp, and trusse his taile shorre aboue his houghes, and so let him stand till you be readie to take your iourney.

After you are mounted you shall for the first houre or two in your iourney, ride verie temperately, as not aboue three mile an houre, in which time your horse will bee reasonably emptyed, and then you may put him fourth as your iourney requires, it shall be good if in your iourney you come to the descend of anye great Hil, to light from your Horses backe, and to walke downe the hill a foote, taking occasion by standing still a while, or by whistling to see if your horse will pisse, which if he refuse to doe, the it shal be good for you your selfe to pisse vnder the horses bellie, & it wil without al question prouoke your horse to pisse, you shal in your traueilling as neare as you can, keep one certaine pace in your trauell, and not one while galloppe, ~~another~~ while amble or trot, and another while go

toote pace, or stand still, for there is nothing which either sooner tyres a horse or brings him to surfeites, or takes from him delight in his labour. When you come within two or three or foure miles of the Inne where you meane to rest all night, you shall in the conuenientest place you can finde, as either in some running brooke or riuer, or some faire fresh pond, water your horse, suffering him to drinke as much as hee will, and in this watering of your Horse you shall obserue to ride him into the water a handful at the most aboue the knees & no further, for to ride him vnder the knees will indanger the foundring him in his feete, and to ride him vp to the bellic will hazard foundring him in the bodie.

After you haue watered your Horse you shall galopp him gentlie vpon the hand for twelue score, or there about, and then in his ordinarie iourneying pace, ride him to his Inne, and as soone as you are lighted, presentlye set your Horse vppe into the Stable, by no meanes (although it bee the generall custome of our Nation) suffering anye Ostlers or idle Boyes to wash him, for it is the onlie venemous poyson & worst euill you can bestowe vppon your Horses bodie; sometimes foundring him, sometimes thrusting him into the fit of an Ague, and when it workes the best yet it strikes such an inward cold into his bodie, that the Horse is worse therefore sometimes for a yeare after: when you haue set your Horse vppe, tyed his head to the emptie racke, and put greate store of litter vnder him, you shall then first with drie wispes rubbe his bellye, foreboothes, & vnder his flanks betwixt his thighes and bodie, then shall you rubbe all his foure legges passing cleane, with your handes wet in water, scowring all grauell and durt both out of his Fetlockes, pasterne, and euerie other crannie which is about any

any ioynt, especially at the bottome of his brest betweene his forelegges, and betwixt his ribbes and his elbowes & also betweene his flanke and his bodie, then with drie wispes you shall rub and make cleane his face, head, neck, buttockes, and euerie other member, not leauing whilst there is one wet hayre about him, then shall you with drie wispes make cleane his stirrops, and stirrop leathers, and vnloosing his garthes one by one, make them cleane also, then making your housling cloath readie (without which I would haue no keeper to ride if his horse be of anye estimation) take off your saddle, and with drie straw rub his backe verie soundly, then laying a good deale of strawe vpon his backe, gird his cloath ouer it with your fursingle, and stoppe him round about with great wispes, then you shall vnloose his taile, and if it bee durtye you shall wash it in a peale of water, and after you haue wrung it well, you shall tye a greate wispe of strawe within it, to keepe it from his legges. If you haue no housling cloath for your horse, then you shall not so suddaine-lye remoue your Saddle, but after your horse is sufficientlie rubd, you shall then stoppe his garthes with great wispes round about. Manye Horsemen vse as soone as they bring their Horse into the Stable, to knit a thumbe roape of Hay or strawe as strait as may bee about the vpper part of the horses docke, and doe imagine it will preserue him from taking colde, and doubtlesse it is verie good indeed.

After your horse is in this wise rubd, dride, and clenfed from sweate and filthinesse, you shall then take vp all his foure legs one after one, & with an Iron picke all the durty and grauell from betwixt his shooes and his fecte, and then stoppe them vpper-dose with Cowe-dung, then you shall put into his Racke a pennye bottle of
hay

hay on which you shall let him towle and pull, with his
 bridle in his mouth still, whilst you shake vp his litter
 handsomely about him, take your saddle, and if the pannel
 be wet, drie it by some fire, then with a sticke beate it and
 make it soft, then pull off your owne bootes, and refresh
 your selfe to your owne contentment, in which businesse
 hauing employed your selfe an houre or more, then come
 into the stable and take your horses bridle and put on his
 collar, then wash the byt or Snaffle in faire water, drye it
 with a linnen or wollen cloath, and so hang it vp han-
 somely; then after your horse hath eaten hay a quarter
 of an houre or more, you shal in a siue sit him half a peck
 of cleane Oates, or Pease and Qates, which your Horse
 likes better, and giue them him, then if hee haue eaten all
 his hay, you shall giue him an other bottle, and so
 let him rest till your selfe haue supped. After supper
 you shal come to your horse and turne vpp his cloath e-
 uen to his suringle, and either with a haire-cloath or with
 drie wispes, you shall rub his bodie all ouer, especially vn-
 der his bellie and betweene his legs: then you shall looke
 vpon his backe; whether your saddle haue pincht or
 wrung his backe, and if it haue you shall lay a little wet
 hay vpon the swelling, and presently cause some sadler to
 mend your saddle, then you shall look if the heate of your
 saddle haue not rays'd any warbles or little knots vpon
 his back, which is verie common with fat horses, and if it
 haue, you shall bathe them with a little Sacke beaten in a
 saucer and they will be well the next morning. This done
 you shal sit him another halfe pecke of Oates, and giue
 them him, then whilst hee is eating them, you shall with
 hard drie wispes, rubbe all his foure legs and icies as may be,
 and then take a quart of mans vrine, and put thereto foure
 ounces of fault-pecter, and halling boild them vpon the
 fire

fire, and stirred it well together, take it off, and being reasonable warme, bathe al his legges therewith exceedingly: then let him stand for an hower or two after, then you shal take a Peale-full of colde water, and put thereto as much horte water as will make it luke warme, and so giue it your horse to drinke: then sift him another halfe pecke of Oates, and giue them him: then giue him as much hay as shall serue him all night, the proportion whereof you may gesse by his former keeping; and putting his litter close and warme about him, let him stande till the next morning, at what time (according to the haste of your affayres) you shall come to him eyther earlyer or later, and the first thing you doe after you haue put away his dung, you shall put off his cloath, and currie, rubbe, and dresse him as sufficiently, and in such manner as hath beene formerly declared vnto you: then cast his cloath ouer him, and let it hang loose about him, then bring him a little colde water, and let him drinke, but not halfe so much as hee would; then giue him another halfe pecke of Oates, and whilst he is eating them put on your owne boots, and prepare your selfe for your iourney, which done, come to your horse; and if he haue eaten his Oates, then you shall saddle him, trusse vp his taile, brydle him, & tie him vp to the bare racke, hauing taken his hay away, then take vp all his soure feet, and plucke out the cowe dung wherewith you stopped them and picke them exceeding cleane; then let him stand till you be readie for your iourney.

Now if it be so that the occasion of your iourney be so great, that you cannot obserue any trauelling pace, but are forst to gallop your horse at least twenty, or thirtie, or fortie mile together; in this case, I would not haue you by any meanes to water your horse before you come to your

Inne, but hauing set him vp warme, and rubbed him drie, as is before shewed; you shall then before you giue him hay, or any thing else, take a pint of verie good Sacke, and warming it luke warme, giue it your Horse with a Horne, and so let him rest halfe an hower after, and then giue him hay, and order him as was before shewed, once in steade of warme water late at night, you shall giue him a warme mash of mault and water, for that with the helpe of trauell, will bring away his molten grease; if the next day following you are to ride him as violentlye also; you shall then when you are readie to take his backe, giue him a pint of Sacke and Sugar-candie well brewde together, and in your trauell euer fauour him as much as you can in the beginning, and put him forth as violently as you please at the latter ende of your iourney.

If you happen vpon such an Inne where you can neither get Sacke nor Sugar-candie, then if you take strong Ale brewed with great store of Ginger, or Sinamon, it will bee as good.

If your horse bee of a tender and daintie stomacke, so that he will refuse his prouender (as for the most part hot mettald horses and yong horses vnacquainted with trauell will doe) then you must take the greater paines, and be euer feeding them, neuer giuing them aboue an handfull at once, till they haue eaten to your contentment. You shall also change their meate oft, as thus: after an handfull of cleane Oates, you shall giue an handfull of Pease and Oates; and after Pease and Oates, halfe a dozen bits of bread. And thus by alteration of foode you shall both make your horse eat well, and also strengthen his appetite: but if contrarie to this, your horse bee both a great eater, and a grosse, then you shall feed him so oft, and with such large proportions, that you bring him to stand

stand and blow vpon his meate as it lyes before him. But this you must not doe by any meanes suddenly, or at one time when your horse is hungrie, for that were to kill him, or make him surfeyt: but you must doe it by such leasurable tymes, that nature hauing no more then shee is able to digest, may in the ende come to bee orderly satisfied: at what time, and not before, you may bee assured your horse is in perfite strength and keeping.

The first principall note or rule which euerie good keeper shall obserue when hee comes into any straunge stable, is with his owne handes to cleanse the racke from all dust, filth, hay, or hay-seedes, and to rubbe the maunger also as cleane as may be in euerie part, least anie infectious Horse haue stood there before, which is most dangerous: and for preuention whereof I would euer haue you in an Inne to let your horse eate his prouender in a Skuttell, or some other cleanly vessell, and not in the maunger.

Now lastly, where as the most of our *English* trauellers doe vse (especially in the Sommer) to bait or rest their horses at the noone time of the day, supposing it prepares them the better for their iourney: although I know the heate of the day is troublesome, both to the horse and man: yet I know these baytings are much more troublesome, neither would I haue any man to vse them; for when the horse hath his limbs chafte and heated with his trauell and then is set vp till they be growne stiffe and starke, and so presently put to his labour againe, then I say the verie paine and grieve of his limbes do so trouble him, that except he be of an extraordinarie spirit, he wil be much subiect to faintnesse in trauell; besides to make your horse iourney continually vpon a full stomacke is both painful, and breeds sickness; wherfore I conclude, these baits,

are good for none but Carriers & Poulters Iades, whose labours not being about foote pace, may euer like Asses haue their prouender bagges at their noses. And thus much touching a horses exercise and labour.

CHAP. 6.

Of sleeping, waking, fulnesse, and emptinesse.



Sleepe in a horse (as in euerie other beast which hath moouing) is a most necessa-
rie and especiall thing, neither can a
horse liue without it, wherefore it is the
place and office of euerie good keeper, to
haue a careful regarde to the rest of his
Horse, and to note both after what manner he sleepeth
and how long hee sleepeth: for if a horse sleepe verie
much, it is a great signe of dulnesse, and fluxe of grosse
and colde humours in the braine: but if he sleepe for the
most part standing, it is a token that he hath some inward
paine in his backe, or bodie, and feareth to lie downe, lest
he cannot rise againe without much torment: if a Horse
lie much, yet sleepe but a little, it is a signe of weake
ioynts, frettized feete, or limbes beaten with trauell: if the
horse neither sleep, nor lie much, but as it were wake con-
tinually, it is a signe the horse hath both a pained bodie,
and a troubled mind, insomuch that he can not possi-
ble liue long, both because hee wantes that which gi-
ueth the greatest strength to Nature, and also the
chiefest meanes both of blood and digestion; sleepe
being

being indeede nothing else but certaine sweete vapors, which ascending from the heart, numbes the braine, and keepes the bodie for a time sencelesse, so that euery keeper should haue a carefull eie ouer his Horse, to see how hee sleepest, when, and how long time: then how hee wakes, when he wakes, and after what manner hee wakes, for if he wake much, his brain is diseased, if he wake often or sodainlie, his heart, liuer, or stomache is grieued; and if hee wake seldome or with much adoe, then his whole powers are ouercome with some colde humor.

Next vnto these obseruations, the carefull keeper shall looke to his horses fulnesse, or the filling of his bellie, I do not meane those phisicall fillinges which consist in humors either generallie or particularlie distributed ouer the bodie, consisting in quantitie or qualitie, for they are obseruations fit for the farryer; but to that fulnesse which onely consisteth in the excesse of meate, wherefore the keeper shall note well the temper of the horses feeding, that is, whether he fill sodainly or slowly and according to his filling, so to temper his dyet, and to giue him the lesse or the more meate according to his appetite keeping the grosse horse emptie the longer before his trauell, and the tender horse with meate till your foote be readie to be thrust into the stirrop, for the full horse with suddaine labour wil soone burst, & the emptie horse with much fasting will not bee able to indure anye violence through faintnesse.

Next to your horses filling you shall note his manner of emptying, that is the state of his bodie, whether he be costiuie or sollible, or whether his vrine haue a free or troublesome passage, & by the rule of them you shal feede your horse more or lesse, as thus, if your horse be sollible or free of vrine, you through that helpe of nature may ad-

uenture to feede him the harder, for albe hee fill much yet he holdeth not that fulnesse any long season, but hauing an easie digestion, bringes his bodie soone to a temperate emptinesse: but if hee bee costieue or haue strait passage for his vrine, although fasting be the greatest cause of costiuenes, yet when you prepare your horse for a iourney, you shall not neede to feed him so extreame, neither shall your meate bee for the moste part any drie food but rather moiste washt meate, of which foodes I shall haue cause to speake more largely in the book of running Horses.

Now you shal vnderstand that fulnesse and emptinesse are phisicke helps one for another, the full horse being to be cured by emptinesse, as fasting, purgation, letting blood, or such like: and emptinesse to be cured by fulnes, as by restauratiō or renewing of those powers which are decayed; so that the keeper carefully obseruing these rules shall so quickly perceiue anie imperfection in his horse, that a sleight preuention shall quickly auoide the greatest mischiese. And thus much for *sleepe and feeding.*

CHAP. 7.

Of the soile, or scowring horses with grasse, and of other foodes.



Touching the opinions of Horsemen for the scowring of Horses with grasse, they be diuers and intricate; some holding forrage, which is the blades of green Corne, as of wheate or barley to be the best, some three leaued grasse, some young thistles, and such like, so also

so also there is a difference amongst them for the time in scowring; one allowing but fifteen daies, another a month, and another the whole summer, neither are they certain in the place where the Horse should be scowred, for some would haue it in the stable, some in a large parke or fiede, and some in a little wald plot of ground, not aboue the quantitie of one or two Akers.

Now to reconcile all these, and to bring them to as orderlie a cōformitie, as is fit for a reasonable vnderstāding, I will declare mine opinion. First, if your horse bee either Hunting horse, running horse, or one that hath been vsd to much trauell or iourneying, I holde it verie necessaric that he be scowred with grasse, either in some parke, close or other spacious ground, where he may haue sweete feeding, fresh springs, or riuers to drinke at, and good shelter both to defend him from flies and Sunnes shine; the time to bee for foure monthes, that is to say, from the beginning of May to the end of August, in which time he will not onelie scower and purge himselfe of grosse and corrupt humors, but also after such cleusing grow strong, fat, and full of health and liuelinesse, recovering by such rest and libertie, that weakenesse, stiffenesse and numbnesse of ioynnts which his labour before had brought vnto him. But if your horse bee a beast of great courage, and onely wantonlye kept, eyther for your mornings exercise in riding, or for seruice in the wayres, so that hee will neither indure with anye patience abroad, nor hath beene put to anie such extreamitie that he standeth neede of recouerie; then I wold haue you onelie to put him to the soyle within the house: that is to say, you shal from the beginning of Iune, till the beginning of Iulye feede your Horse onely with grasse & no longer: & during the time, you shal neither cloath him, dresse him, nor ride him, onely

onely you shall keepe his plaunchers cleane from dung,
 & litter him with nothing but the offall or reffuse grasse
 which he puls into the maunger, but will not eate : you
 shall also during this soyle time feede him with prouender
 in such sort as you did at other times, onelie I would haue
 his prouender to be beane-bread well baked , as for his
 grasse, if the first three daies of soyle time, you doe giue
 him forrage, tis exceeding good , and after the sowrest
 grasse you can get as that which in Orchardes growes
 vnder fruite trees, or else such as growes in Garden alleys,
 for the more sower and courser the grasse is, the better it
 scowreth; and in this case you should respect no feeding,
 neither should you mowe any more grasse at one time
 then your horse can convenientlie eate in the in-
 stant ; as for making your horse to neede much, or to
 purge his head much by fumigation in the soyle it is need-
 lesse, for the grasse it selfe will doe it sufficientlie without
 anie other medicine. If your Horse during his time of be-
 ing in the soyle, happen to swell in his sheath, or about his
 cods, it shall be exceeding good in that case once or twice
 a day, either to swimme him, or ride him through some
 water that will reach aboue the horses midde bellie ; but
 for making a daylie exercise of swimming him without a-
 nie speciall occasion, I doe greatly disalow it, for it both
 straines a horses limbes, and brings him within the danger
 of Crampes and conuulsions , neither doe I allowe (al-
 though it be the practise both of the *Italians* and some of
 our English keepers) to giue a horse when hee is in soyle
 either scowring or Purgation, as either sodden Rye, Mel-
 lons, greene Figges, the intralles of a Tench, or Harbell
 mixt with white wine, or anye such like trippinge, for I
 haue seene where such like courses hath bene taken that
 the horse hath falne into such an vnnaturall scowring,
 that

that no possible meanes would stop it, till the horse hath dyed with the violence. Others haue vsed in the soyle, in stead of wholsome and drie prouender, which is fittest to be mixt with such cold, moist, and raw food, to giue their horses either sodden beanes well salted, and wheat bran, or Coleworts and bran or else boyld Bucke, all which are both vnwholsome, full of rottennesse, and breed many foule diseases, wherfore I aduise all keepers to be carefull to eschew them; and rather to take leasure and feede with such foods as are both healthfull & natural, of which kinds you haue had alreadie formerly declared. And thus much touching the Soyle, and the scowring of horses in the sommer season.

CHAP. 8.

Of the passions which are in horses, and the loue which keepers should beare vnto them.



Leauing to make any philosophicall discourse, or to argue of the passions or affections which are in horses; how they haue their beginnings from sense, and their workings according to the course of nature. It is mooste certaine, that euery horse is possest with these passions, *loue, ioy, hate, sorrow, and feare*: the first two springing from the alacritie, chearfulnesse, and good disposition of the minde, by which the Horse is made to be familiar with the man, obedient, kind and docible, the other three from the corruption and putrification of nature, by which he becomes fierce, mad, and full of amazement, so that it is the office of euery keeper out of

his Iudgement and experience to learne to know when and at what time his horse is opprest or troubled with the Fluxe of any of these affections, that hee may by the applying of fit remedies abate and suppress them in the excesse of their greatnesse, which nothing doth at anye time sooner bring to passe then the mildenes and gentle disposiion of the keeper towards his Horse, for it is most certaine, that when keepers of Horses eyther out of their chollericke furies, or ignorant misbehauours, doe anye thing about a horse eyther rashlye, violentlye, or with the vse of vnnecessarie torment, that they onelie by such indiscretion doe create in horses all those euill affections from whence any restife qualitie doth proceed, and therefore euerie keeper must with all lenitie and sobernes both in word and action procure the loue of the horse which he keepeth. And yet I doe not meane that a good keeper shall be altogether so voide of indignation, that hee shall suffer his horse to runne into any kinde of vice, without the touch of correction, for thereby I haue seene manye horses so dissolute and disobedient that they haue gone beyond the power of reclayming, whence it hath come that some Horses haue slaine their keepers, and some haue doone almoste as euill in other courses. A good keeper therefore must knowe when to correct and when to cherriish, not giuing either blowe or angrie word, but in the instant of the offence, nor to punish or strike the horse any longer then whilst his present fault restes in his memorie. Also I would haue the keeper to obserue, that where gentlenesse and meekenesse will preuaile, there by no meanes to put in any vse, eyther terror or torment, for as the keepers greatest labour is but to procure loue from the Horse, so the onelie thing that is pleasant to the Horse, is loue from the keeper; insomuch that there must
be

be a sincere and incorporated friendship betwixt them or else they cannot delight or profit each other, of which loue the keeper is to giue testimonie, both by his gentle language to his horse, and by taking from him any thing which he shall beholde to annoy or hurt him, as moates, dust, superfluous hayres, flyes in Summer, or anye such like thinge, and by oft feeding him out of his hand, by which meanes the Horse will take such delight and pleasure in his keepers companye, that hee shall neuer approach him, but the horse will with a kinde of chearefull or inward neying, show the ioy he takes to beholde him, and where this mutuall loue is knit and combined, there the beast must needes prosper, and the man reape reputation and profit. And thus much for the horses passions and the keepers affections.

CHAP. 9.

*The Office of the Coachman, and obseruations
for his place.*

The vse of Coaches hath not beene of anye long continuance in this kingdome, especially in that general fashion, as now they are vsed: for if formerlie they were in the hands, and for the ease of some particular great persons, yet now eyther thorough the benefits which are found by them, or through the vnaccustomed rarenesse of them, they are growne as common as hackneyes, and are in the handes of a

many as either esteeme reputation, or are numbred in the Catalogue of rich persons: wherefore since they are in such generall vse, and esteemed such a general good, I thinke is not fit in this my generall booke of horfmanship, to omit or forget some necessarie obseruations which are helping and needfull to be knowne vnto the skilfull Coatchman, and the rather, sith the commodities which redound thereby, are chiefly imployed in the seruices of Ladies and Gentlewomen, to whome both my selfe and euery honest man is in his first creation obliged, yet I doe not meane herein to make any tedious or long discourse, eyther of the benefites of Coatches, the diuersities, proportions, shapes, nor alterations, because euery vnderstanding Coach-maker, and euery seruiceable Coatch-man can giue proofes and reasons of each difference: neyther is my profession to meddle with the shapes of tymbre, but with the natures of horses; nor will I speake of the seuerall customes or fashions of *Italie*, or *Fraunce*, because as farre as I can iudge, whatsoeuer we practise in this arte of Coach-gouerning, is but an imitation of the shapes and chaunges of those Kingdomes; therefore for mine owne part I meane heere onelye to handle some fewe notes touching the choyce of Coatch-horses, their keeping, and appa-
ling.

Of the choyse
of coatch-
horses,

First then to speake of the choyse of Coach-horses, some are of the opinion that your *Flemish* Horse is the best for that purpose, because hee is of strong limbes, hath a full breast, a good chyne, and is naturallie trayned vppe more to draught, then to burthen: others doe preferre before these horses the *Flemish* Mares (and I am of that opinion also) both because of their more temperate and coole spirites, their
quiet

quiet sociableness in companie, and their bringings vpp, which onely is in the wagon, by which meanes traueilling with more patience, they are euer of more strength and indurance, yet both these horses and Mares haue their faults euer coupled to their vertues, as first their paces are for the most part short trots, which contain much labour, in a little ground, and so bring faintnesse of spirit in little iourneys, whereas indeede a Coach horse should stretch forth his feete, and the smoother and longer hee strides, the more way he riddes, and the sooner comes to his iourneis end without tiring. Next, their limbes from the knees and Cambrels downeward are so rough and hayrie, and the horses naturally of themselves so subiect to fault and fretting humors in those parts, that neither can the coachman keepe them from the *Paines, scratches, Mallanders, Sellanders* and such like diseases, nor the Farryer oft times with his best skil cure them when they are diseased. Lastly they are for the most part of restie & hot spirits, so that albe they be excellent and forward in the draught, yet in our English nation amongst our deepe clayes and myerie waies, they are not able to continue, but growe faint and wearie of their labour, and it is euer a rule amongst them, that after they haue beene once tyred, there is no meanes againe to restore them to their first mettrall or spirit.

Now to tel you mine opinion which is the best Coach-horse either for streetes of Citties, or iourneying vppon high waies, I holde not any horse comparable eyther for strength, courage or labour with the large shapt English Gelding, for hee is as milde and sociable as the Flemish Mare, more able to indure trauell, better shapt, and longer continues in seruice, for the Mare if shee be proudly kept (as of necessitie the Coach mare must be) she wil then couet the horse, and if she haue him and holde to him, hee

yeres seruice is lost: if she want him, you shal either indan-
 ger her life with the corruption of her pride, or elle with
 Leprosie; but if they be speade or gelte mares, they be the
 the worst of al, for the body & spirits being somuch ouer-
 coold, they are vtterly disabled for any violent extremity;
 look e how much the Gelding is short of the stond-horse
 in courage, somuch is the spead mare short of the gelding:
 wherfore for the auoidance of all inconueniences, the best
 for the coach is the large, strong english gelding, the next
 him is the Flemish mare, and the last is the Flemish horse,
 the *Pollander* is exceeding good, but hee is somewhat too
 little & too fierce of nature, but for tyring that will he sil-
 dome or neuer doe, with any indifferent order. When
 you haue determined touching the breede, or race of your
 coach-horses, you shal then look to their shapes & colors;
 first for their colours, I haue formerly showd you which
 is the best, so that you shal obserue that in any case (so nere
 as you cā chuse the) your coach-horses be al of one color,
 without diuersitie, & that their marks or especial semblā-
 ces be also alike, as thus for exāple: if the one haue either
 white star, or white rache, bald face, white foote, or bee of
 pide color, that the others haue the like also. For their
 shapes, you shal chuse a leane proportioned head, a strong
 & firme necke, a ful, broad, & round out-breast, a limbe
 flat, short ioyned, leane and well hayred, a good ben-
 ding ribbe, a strong backe, and a round buttocke; general-
 ly they would be of a broad strong making, and of the tal-
 lest stature, for such are moste seruiceable for the draught,
 & best able to indure the toile of deepe trauell. Now for
 the properues, they must be as nearely alyed in nature &
 disposition, as in colour, shape and height, for if the one
 be free, & the other dul, then the free horse taking al the la-
 bour, must necessarily ouertoile himselfe, and soone both
 destroy

destroy his life & courage, so that they must be of alike spirit & mettall: also you must haue an especiall regard that their paces be alike, & that the one neither trot faster then the other, nor take larger strides then the other, for if their feet doe not rise from the ground toether, & likewise fall to the ground together, there can be no indifferencie or equality in their draught, but the one must ouertoyle the other, where as indeede they ought to bee of such equall strengthes, paces, & spirits, that as it were one body their labour shold be deuided equally amongst thē; they ought also (as neare as you can) to bee of louing, tractable and milde dispositions, not giuē to bite, strike, & especially not to yark & strike with their hinder legges backward, for it both doth indanger the life of the man, and also doth hazard the spoyling of the horse, by ouerthrowing himself in his harnes. They shold also haue perfect good & tender mouthes; & ought to haue their heads well settled vpon the bytt before they come into the Coach, being learnt to turne readille vpon eyther hand, without discontentment or rebellyon, to stop close and firme; and to retire backe free lie with good spirit and courage; which are lessons fully sufficiēt to make a compleate good coach-horse; for although some coachmen more for brauery or pride thē either for arte or profit, wil make their horse stand and coruet in their Coaches, yet I would haue all good Coachmen know, that such motions are both vnfit, vncomelye, and moste hurtfull for Coach-horses; not onelye taking from them the benefit and delight in trauell, but also making the Horse to mistake his corrections, and when he growes to any faintnesse or dulnesse, or comes into any such ground where the depth thereof puts him to his full strength, may sometimes the coach stickes & wil not come away at the first twich, if then the coach-mā-

sert them forward with his whip, they presentlye fall to coruet & leape, refusing to drawe, in their greatest time of necessitie.

Now for the manner of keeping them, and dyeting them; they are in all pointes to be drest, pickt, and curryed like your ordinarie traueilling horse, and to haue their foode and walkings after the same manner, onelie their allowance of prouender would be of the greatest size, for their labour being for the moste part extreame, and themselues generallye. Horses of grosse nature, their chiefest strengthes moste often dependes vpon the fulnesse of their bellies. In iourneying you shall vse them as is before taught, for iourneying horses, onelie if they be either Flemish Horses or Flemish Mares, and by that meanes bee subiect to paines and Scratches, then after your iourneye when you haue bathed your Horses legges with pisse and Salt-peter, you shall then annoint all his pasternes and Fetlocks, with Hogs-grease and mustard mingled together, and if he haue either scratches, or paines, it will kill them; if he haue none, it wil preuent them from growing, & keepe his legs cleane howsoeuer he be disposed.

Now for the harneying or attyring of Coach horses, you must haue a greate care that the long pillowe before his brest, be of gentle leather, full, round and verie soft stopt, and that the little square pillowes ouer the point of his withers and tops of his shoulders, bee likewise verie soft, for they beate the weight of his harnesse, and some part of his draught, you shall see that the hinder part of your harnesse which compasseth the neather part of his buttocks, and rests aboue the horses hinder houghes bee easie and large, not fretting or gauling off the hayre from those partes, as for the moste part you shall see amongst vnskilfull Coachmen, the draught breadthes or
Coach

Coach treates, which extend from the breast of the horse to the bridge tree of the Coach, must bee of exceeding strong double leather, well wrought and sewed, which (till you bring your horse to the Coach) you must throw ouer your horses backe cross-wise, your headstall and reynes of your bridle, must likewise bee eyther of strong leather, or els of round wouen lines, made of filke or threed, according to the abilitie of the owner, or the delight of the Coach-man: yet to speake the truth, those lines of filke or threed are the better, because they are more nimble, and come and goe more easily: as for your bits, and the proportion of your cheeks, they are formerly discribed, and must be sorted according to the qualitie of the horses mouth. Now forasmuch as I cannot so sufficiently in words figure out the proportions of euery seuerall part of these harnesses, neither in what sort they shal be ordered because they alter according to the number of the horses, two horses being attired after one sort, three after another, & foure different frō both, to gine a full satisfaction to euery ignorant Coachman: I doe therefore aduise all that are desirous to better their iudgements in such knowledges to repaire to the stables of great princes where cōmonly are the best mē of this art, & there to behold how euery thing in his true proportion is ordred, & frō thence to draw vnto himself rules for his own instruction; only these sleight precepts I will bestow vpon him: first, that he haue ever a constant sweete hand vpon his horses mouth, by no meanes loosing the feeling thereof but obseruing that the horse doe rest vpon his bytte, and carrie his heade and reyne in a good and comelye fashion: for to goe with his heade loose, or to haue no feeling of the bytte, is both vncomelye to the eye,

and take from the horse all delight in his labour. Next when you turne vppon eyther hande, you shall onely drawe in your inmost hande, and giue your outmost libertie, as thus for example: If you turne vpon your left hand, you shall drawe in your left reyne a little straiter, which gouerns the horse vpon the left side, and the right reyne you shall giue libertie vnto, which gouerns the horse on the right hand, so that the horse of the neare side with the left hand comming inwarde, must necessarily whether he will or no, bring the horse of the farre side, (which is the right hand) to follow him: and in these turns you muste euer bee assured to take a full compasse of ground, both according to the length of the Coach, and the the skil of the horses, for there is nothing doth amaze or disturb a coach horse more thē whē he is forst to turn sodainly, or straiter then the Coach will giue him leaue, whence hee first learnes to gagge vp his heade to loose his reyne, and to disorder contrarie to his owne disposition. You shall also make your horses after they haue stopt, stand still constantly, and not to fridge vp & downe pressing one while forward, an other while backward, both to the disease of themselues, and the trouble of others: the Coachman also shall not vpon euery sleight error or sloathfulnesse correct his horse with the ierte or lash of his whippe, for that will make them dull vpon the correction, but he shall rather now and then scarre them with the noyse and smart sounde of the lash of his whippe, suffering them onely to feele the torment in the time of greatest extremitie: you shall when you first intende to breake a horse for the Coach for two or three dayes before you bring him vnto the Coach, cause him to bee put vnto the Cart, placing him in that place which

Car-

Carters call the lash, so that hee may haue two Horses to follow behinde him, whom together with the load that is in the Cart hee cannot drawe away; and two horses before him, which with the strength of his traytes will keepe him in an euen way without flying out, either vpon one side or other. Thus when you haue made him a little tame, and that hee knowes what it is to draw, and feeles the setting of the neather part of the collar vnto his breast, then you may put him vnto the coach, ioyning vnto him an old Horse, which hath both a good mouth, and is of coole qualities, that if the younger horse shall fall into any franticke passion, yet his stayednesse may euer rule and gouerne him, till custome and trauell haue perfetely brought him to knowe his labour: I haue seene a Coach man who hath put too young horses vnbroken into a Coach together, and I haue seene them runne away, ouer-throw and breake the Coach, and mischiefe the Coach-man: wherefore I would haue euerie Coach-man that will worke with Arte and safetie to take longer time, more paynes, and by the method before shewed to bring his horses vnto perfection.

The last obseruations that I woulde haue a Coach-man keepe, is that whensoever he goes abroad with his Coach, hee be assured euer to carrie with him his horses cloathes, that whensoever hee shall bee forced eyther through attendance, or other chaunces to stand still anie long time, he may cast the cloathes ouer his horses, to keepe them warme, and from the coldnesse of the weather. He shall also haue euer in his Coach Coffer, Hammer, Pinners, Wimble, Cheffell, & Nayles, that if any small fault happen about his Coach, hee may himselfe amend it, he shall also haue in his Coach Coffer, oynments for his horses legges and hooves, especially if he be

Flemish, for they haue seldome or neuer good hooves; hee shall also haue shoemakers blacking to dresse the outside of his Coach and harness with: he shall haue a brush for the inside, a blunt iron to dresse his wheelles, either oyle or sope for his axeltrees; and main-combe, curry-combe, and other dressing cloathes for his horse, so that generally he shall keepe his Horses neatly; his wood-worke cleanly, his leather blacke, his buckles bright, and euerie other seuerall ornament in such comlineesse, as may bee for the owners profite, and the keepers reputation. And thus much for the Coach-man and his office.

The end of the fift Booke.



